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CGE President

Another Maritimer has hit the top in Canadian business. He is Fredericton-born J. Herbert Smith, 47, new president of Canadian General Electric Co. An electrical engineer by profession, he started with CGE as a young graduate of University of New Brunswick. Today he heads an electrical giant employing 15,500, with sales last year of $248 million. He is the first Canadian-born president since 1925. (*Personality sketch, p. 6.*)

NATION'S BUSINESS

Promises Are Easy: Performance Counts

The first speech from the throne prepared by Canada's new Conservative government will always be memorable as the first delivered by the Sovereign in person.

But there was nothing memorable about its contents. It was strictly a run-of-the-mill performance. This seems to have been one of the occasions when Mr. Diefenbaker remembered Mackenzie King's operating rule never to say anything in a way which people would remember.

The really important rule for Conservative ministers to keep in mind is not to proclaim bold policy objectives without knowing how to reach them.

Proclamation of a "national development" policy sounds fine.

A "better understanding" about fiscal arrangements is urgently needed, and it is to be hoped the new bunch can improve on the last government's position.

But we could "look forward" more cheerfully if the new government had in past months been working a great deal harder at acquiring real understanding of the problems involved and knowing what to say when they meet the provinces.

Meanwhile, the speech from the throne promises to spend a lot more money. It gives no indication where it is to come from.

The new government is "green" at its job and some of its members have certainly yet to learn just how complex are most of the problems with which they have to deal. Only to the ill-informed do great matters seem simple of solution. It will not be surprising if the next election is uppermost in the minds of many now on the "winning" side of the House of Commons.

But even for election purposes, well-considered policies and impressive performance are the best prescription.

* * *

Sputnik Is a Spur

Now that the world has recovered from its initial shock at learning of Russia's achievement in establishing an artificial satellite, it would be well to evaluate the new situation that has been created and see what lessons we should learn from it.

The lesson of Sputnik is a tough one, but it is better that we should learn it now rather than when it is too late. Russia is in the first rank, both in its industrial potential and so far as its scientists are concerned.

In this connection it is worth remembering that in the all-important field of nuclear energy her scientists are operating an atom-smasher that, on Western admissions, will be the most powerful in the world for some years to come.

Russia's way of achieving these things is simple. It is the familiar choice of guns or butter. She sets herself certain targets and concentrates enough of her national wealth and manpower to achieving them. Grim austerity for the Russian masses is the result while we enjoy our entertainments and our chromium-plated luxuries.

If we in the West do not wish to follow the Russian example, and if we wish to continue to enjoy good things in the future as well as the present, we must strengthen the links between nations in the West to ensure that, jointly, if not individually, we are more than a match for our rival in the military field.

But we must also try to make the way of life we defend a better advertisement for our creed.

If we claim equality for all men we must show that we really mean it and that Canada has no "Little Rock." If we boast a Christian way of life we must show that we mean this as a seven-day-a-week rule for our personal and business lives.

And in the vital field of education, where Russia has probably won more ground faster than anywhere else, we must ask ourselves whether the time has not come to rate our science and engineering teachers more in keeping with their importance to our destiny and to that of our children.

Keeping the crooners and burlesque comedians as "the greats" of our society is a dangerous course. That is what Rome tried. They found the result was disaster.

* * *

Our Historical Good Luck

The Queen's visit to Ottawa was a tremendous success. Her Majesty spoke and moved with a grace that charmed all beholders. The pageantry went off with all possible brilliance.

It is a good thing that sober government routine should be splashed with color from time to time. These ceremonials give pleasure. They remind people that the law is majestic and that history has taken a long time to make.

Another point seldom stressed is that constitutional or parliamentary monarchy is a very sensible form of government.

The monarch, under this system, has no political power but serves as permanent head of state and symbol of the community's continuous life. With such a King or Queen on the throne, parties can quarrel and political changes can happen, at any time, without disturbance of the peace.

Republics, taken by and large, don't stack up well in comparison. They and their leaders are constantly engaged in fighting the next election, and to that party interest, the interest of the country is most of the time taking second place.

A president may become sick in body of mind. He may lose touch with public opinion. His leadership may falter or disappear. There's nothing to be done in any of these circumstances except wait for his term to end or have a revolution.

The Canadian system of course is not the product of superior wisdom. It's strictly a matter of historical good luck.

'STEERAGE' AIRCRAFT

Secret Airlines Fight Over New Fare Slashes

World Airlines Have Almost Broken Peace Pipe In Their Argument Over Proposed 'Steerage' Flights — Would Open Markets

By CLIVE BAXTER

MONTREAL (Staff) — Chances are a $300-or-so round trip air fare to Europe may not be far off.

For the past three weeks delegates to International Air Transport's traffic conference have been arguing the rights and wrongs of such a move.

The talks have strained the much-publicized unanimity of the airlines almost to bursting point.

At issue is the introduction of a fourth class of air passenger on the North Atlantic.

Commonly this is called "steerage" although the airlines can be counted upon to think up a more glamorous title.

Case for "steerage":

- **It would open a whole new market**, just as tourist flying did five years ago. With a low enough fare, a holiday across the Atlantic becomes practical for everyone.
- **And with the coming of faster** and faster aircraft people will not need the present comforts in flight.
- **It would block the inroads** of cut rate charter operation, except for groups wanting to travel as units.

Case against:

- **Operating costs are already running** neck and neck with revenues. "Steerage" would cut away tourist flying altogether—simply having the effect of reducing the income per passenger in return for a few more seats per plane.
- **Now is the time to try to get** increased, not decreased, fares.

There is no hard and fast division between the world's air carriers. At present there are about as many different opinions as there are airlines.

So far the lines are "playing the game" and will not reveal which support and which oppose the move.

Watch for Time, Cost Cuts In New Blueprint Standards

Do much work on U. K.-designed products?

If so, you can look forward to cuts in time and cost within the near future.

Representatives of Canadian, U. S. and U. K. standards groups have agreed to unified engineering drawing practices.

This means that a blueprint produced in Canada or the U. K. will be easily understood by a U. S. foreman, and the other way around.

It can slash thousands of dollars off costs in Canadian industry, by saving the expensive re-drawing of blueprints.

The new agreement was between delegates forming the Engineering Draughting Practice Committee of ABC (America-Britain-Canada).

ABC originated during World War II.

The first major project of this committee was the unified screw thread which is now in use not only in these three countries but also in many others.

Tory Move Picks Gas Out of Current Politics

OTTAWA (Staff) — The call for a coherent national policy on the use and export of all forms of energy, which was first made in **FP** exactly three years ago, came a large step nearer this week when Mr. Diefenbaker announced a Royal Commission headed by Henry Borden, president of **Brazilian Traction.**

Politically, the move is being looked at with great interest. The Conservatives made a lot of noise in recent sessions against **Trans-Canada Pipe Lines** in particular. But most of them now think the pipeline deal was pretty good.

By setting up the Royal Commission which can take many months on its investigation, the Tories effectively take the pipeline out of current politics, and they have an answer for the CCF which is expected to move for nationalization of the whole line.

Trans-Canada has made astonishing progress in this construction season and the Tories would find it disagreeable to have some of their previous speeches read back to them at this session by the Opposition.

So, good as the Royal Commission scheme is in its broader aspects, it has the extra advantage of taking this big business out of politics—likely at least until after the next election.

The important feature of the Royal Commission assignment is to study the creation of a national energy board, able to regulate all forms of energy in co-ordinated fashion. The proposal was supported earlier this year by the Gordon Royal Commission.

The new commission's terms of reference cover: Best export policy to serve Canadian

(Continued on page 8, col. 4)

Hush-Hush Staking Rush? Northwest Ontario Rumor

By FRANK KAPLAN

Keep your eye on Northwestern Ontario for a copper-nickel staking rush.

Hush-hush staking by mining big boys may herald a full-scale rush in the north-of-Lake Nipigon area.

Word leaking out of the Lakehead indicates that at least two areas north of Armstrong, Ont., on the **CNR** line are the scene of blanket staking.

Details, p. 45.

These areas are believed being checked for copper-nickel mineralization.

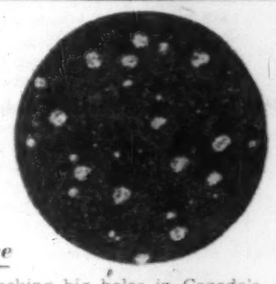
In addition, veteran prospectors who worked Northwestern Ontario gold camps in the late 1920s are returning for a new look at old properties.

The areas attracting major mine-finding organizations are:

- **Immediately north and east of Armstrong** where more than 700 claims are believed to have been staked.
- **A belt about 80 miles north of Armstrong** on the Albany River.

Ontario government reports reflect this increased activity in these areas with claims recorded in the two mining divisions concerned almost doubling in the first nine months of the year.

Inside



Flu from Cosmic Space

Flu—Asian and other—is knocking big holes in Canada's labor force. This tiny virus—which **FP**'s science editor says may have originated in outer space—could cause a lot more trouble before it leaves. A special report ..... pp. 25-26

Are Stocks in a Buying Range?

One investment analyst's charts indicate that prices have dropped to levels which offer the best values since 1954 ..... p. 29

Tales That Prices Tell

Stock market girations baffle many, but they make some sense if the intermediate flurries are ignored ..... p. 5

Our Misunderstood Dentists

Here are the real reasons why you have to wait so long for an appointment with your dentist ..... p. 20

Story With a Happy Ending

Here's a bitter story of labor grief which had a happy ending ..... p. 19

BROKERAGE BAD

Never Mind That Bonus, Will We Still Work Here?

By W. L. DACK

Santa Claus is going to make a wide detour around Bay and St. James Streets this year.

Hopes of fat Christmas bonuses have gone out the window long ago.

The big worry now is just who will be at his desk when the festive season rolls around.

The brokerage business is that bad.

Most houses have been operating in the red on the reduced daily share turnover on Canadian exchanges for over two months now.

Some houses, specializing in industrial shares, are still managing to eke out a narrow profit.

Expense-cutting programs which had been held to very modest levels in August and early September, awaiting an anticipated fall market upturn, have been sharply stepped-up.

Laying Off Staff

Almost all of the 85-90 member firms of the big Toronto Stock Exchange have started to lay off staff.

This ranges from just not replacing staff that quits voluntarily to a fairly wholesale cut-back in every department.

Generally the cut-back hasn't assumed drastic proportions as yet, but practically every firm is studying such moves at the moment.

"When business keeps running at about one sixth of what it was last year it stands to reason we have to start cutting back all along the line," a partner of one well-known house told **FP** this week.

"We have been willing to carry along for awhile," another brokerage official told **FP**.

"There's plenty of liquid funds around just awaiting re-investment opportunities and customers' accounts are generally in good shape. But we can only live so long on that kind of consolation."

Actually, brokers' loans — still the best available yardstick on state of health of margin accounts — are being kept well in check.

In August, for instance, total loans on the TSE were only $63 million, or roughly 0.14% of quoted market value (at months end) of shares of all stocks listed.

That's even healthier than same time last year when buoyant markets and heavy daily turnover was the trend (percentage at end of August, 1956 was 0.21%).

Since the highly speculative mining share market was hard hit this spring and early summer, brokerage firms have had plenty of time to get most margined accounts in better shape.

The exchange's surprise audit in early September showed that firms had trimmed loans to clients considerably.

$4 Billion Slice

Actually the August and September market declines have sliced a whopping $4 billion from the values of stocks listed on the TSE, or roughly 10%.

The first couple of weeks of October have cut an estimated further $1 billion to $1.5 billion from the total.

But so far this heavy tumble has produced surprisingly little selling on the part of the average investor.

Investment and pension funds are reported a little more active on the selling side. But even

(Continued on page 8, col. 4)

NOTHING LIKE '29

The Stock Market

FP survey shows real market strength in margin positions . . .

By PAUL S. DEACON

Healthy margin account positions are a factor of real strength in today's stock market.

An **FP** survey of brokerage firms which lend money to clients with stock as security for the loans, shows this picture:

- **The majority of business** is being done on a cash basis.
- **Percentage of margin business** to total business is declining.
- **Total volume of margin loans** has been cut by more than one-third in the past year.
- **Ratio of brokers' loans** to total value of listed securities has been reduced by one-third in the same period.

Many investment firms, including many of the country's largest, do not lend money to clients at all. If their customers want to use their securities as collateral for loans, they have to arrange it with their own bankers.

"If you're trying to compare the present situation with 1929, forget it," one broker told **FP**.

"Our loans then were 7½ times what they are today. It's an entirely different atmosphere now."

As a percentage of the market value of clients' holdings, margin loans in this firm were equal to about 10%.

Assuming no change in market prices in the process, therefore, sale of 10% of securities held would eliminate all the loans against the securities.

Said an investment house specializing in mining stocks:

"We haven't been too seriously affected by the market decline, but margin requirements have forced a bit of selling here and there.

Cash Basis

"As the years go on, the percentage of our business being done on cash has been growing. Currently, about 75% of our business is on a cash basis, and 25% on margin."

Said another, which does a more varied business: "The percentage of stock purchases on margin has tended downwards in the last few months, if anything. This is chiefly because new accounts have not been opened to replace old ones closed by death and other reasons."

And another: "Margin accounts are not much of a problem as far as we are concerned. Most of our margin business is off, with the drying up of the speculative mining issues.

"Our clients now are paying cash for good industrial stocks, or mining issues to be held for the long term."

Latest Toronto Stock Exchange published figures show brokers' loans at $63 million, 0.14% of the total value of securities listed on the exchange.

In July 1956, the total was $100 million, equal to 0.21% of the value of listed securities.

Wenner-Gren Power Plans Hang on New B.C. Survey

From Our Own Correspondent

VANCOUVER — Can Axel Wenner-Gren's business empire transmit four million hp of electricity 500 miles from Peace River to Vancouver — and make money?

A decision on the Swedish industrial baron's $500 million power plan for northern B. C. may come within a year.

The decision will depend on new detailed surveys still in the planning stage.

Special provision for this has been made in an agreement between B. C. and the Wenner-Gren interests. (See p. 10.)

If Wenner-Gren can make the power, odds are high that he can profitably transmit it to Vancouver and southern B. C.

New techniques in Wenner-Gren's native Sweden have transmitted power at very high voltages over long distances.

Russia, too, today operates a 505-mile power link at 400,000 volts ac. The Reds also plan a 340-mile line at 800,000 volts dc.

The hydro scheme is part of the plans announced earlier this year for development by the **Wenner-Gren Foundation** of a 40,000 sq. mile area in the Rocky Mountain Trench (**FP** Feb. 16).

A subsidiary, **Wenner-Gren B. C. Development Co.**, was set up to spend $5 million on sur-

(Continued on page 8, col. 4)

'All Goods' Supermarkets In Canada by End of 1958

By RODNEY TOUCHE

Stand by for general merchandise supermarkets.

For sale on tomorrow's supermart shelves: Clothing, appliances, furniture, sporting goods, cameras, books—and food.

This trend toward one-stop, one-roof, one-store shopping is about to start in Canada.

Grand Union-Carroll's plans to open three supermarts like this in Greater Toronto before the end of 1958, **FP** learns.

Cost: Probably about $3 million.

In the three stores, non-food items will outnumber food two to one.

The non-food items will sell at discount house prices and, in some case, on time payment plans.

This method of merchandising, predicted earlier this year (**FP** June 29, Signs and Portents), means sharp competition for almost all classes of retail trade.

Grand Union Co. in the U. S. has been operating two of these giant combination supermarkets since 1956.

The company plans six more in the eastern states in addition to the three in Canada.

While disclosing plans of the Canadian operation, Grand Union-Carroll's executives had no news on when the company would offer stock here.

Plans to offer an exact 50% of a new common stock issue in Canada were announced three months ago. It is understood, though, that the stock will be issued before the end of this year.

THE SIGNS AND PORTENTS

NOTICE A BOOST in advertising budgets by the electrical industry as natural gas gets nearer. **Ontario Hydro** is currently working out a program that will run to several hundred thousand dollars.

* * *

DON'T BE SURPRISED if an industrialist offers the Queen a royal lodge in Canada. She has been given similar far-from-the-crowd hideaways in New Zealand and Kenya.

* * *

BRITISH CARS are heading for a unique technical improvement that will be a major aid to sales. The development: A transmission system with an infinitely variable gear. The ideal ratio comes into use automatically with each change in engine load.

IF YOU DRIVE south next year expect to be able to rent air conditioning for your car. About $35 a month will bring a two-wheel trailer-full of equipment which hooks to the car by hose.

* * *

EXPECT A WIDER use of oxygen in steel manufacture. European and U. S. experiments show that the cost of oxygen is more than offset by the results obtained. First commercial application in North America begins next month and there are already signs of it spreading.

* * *

PLASTIC-COATED steel is now in full production in the U. K. The steel has a coating of polyvinyl chloride many times thicker than paint. It is claimed to be virtually scratch proof.

SEE PLASTIC used to make ship's propellors. A Danish firm is making blades out of nylon. They are claimed to be much less prone to vibration (because of light weight). U. S. firms are experimenting.

* * *

LATEST ITEM for skin-divers: Two-way underwater telephone that works on a one-mile range. It's an ultrasonic system that uses no wires—priced about $1,500.

* * *

THE NEXT THING you are likely to see in the sky: Clouds of bright orange sodium vapor. Released by rockets, they should produce a glowing trail 100 miles or more up. Scientists plan to use these sodium flares to find out more about the upper atmosphere.

ESTIMATES THAT the Soviet "satellite" will spin in space for a year leave unanswered the question: Where will it go then? Some scientists believe its shell is strong enough to let it return to earth. There would be no control on where it landed.

* * *

SUCCESS OF bread vending machines in Kingston and Quebec City is likely to lead to much wider use. Weekend sales are reported to be as high as retail grocery store sales.

* * *

WHEN IT COMES to swine the Canadians have something the U. S. has not got, namely meat. The U. S. Department of Agriculture has sent a team of specialists here to find out how we produce hogs that are so much better.

Stock Market Highlights

Industrials

Canadian **industrial** stocks lag behind both a sharp decline and rebound on **Wall Street.** For details of some of the stocks that moved, see p. 4.

Mines and Oils

Mining and oil issues continue weak with heaviest downward pressure on **oils.** For details of some of the stocks that moved, see p. 45.

Oil producers are again hardest hit by selling. **Gas** stocks tend to follow the decline but show signs of swinging higher when general market improves.

Mines sag quietly with further pressure on **coppers, lead** and **zinc** issues. **Uraniums** and **golds** are relatively steady.

elegance with individuality . . .

TOPCOATS by *Birkdale*

Special attention to minute details, such as deft hand felling of the collar for a proper fit and drape. Luxury woollen imports from the British Isles—tweeds, velours, saxonies, worsteds, gabardines. Dramatic fall colours plus our interpretations of the newest male style trends.

All contribute to the individual elegance you'll feel, the admiring glances you'll receive in a Birkdale Topcoat, only at

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Beautifully packaged in a colorful gift container — enclosed in a gold-foil-wrapped carton — that seals all the rich rare excellence so distinctive to "Bird of Paradise" Brandy Fruit Cake.

We will supply a greeting card — or be happy to enclose yours. Simply send us your gift list and we'll be glad to handle all details.

Write today for further information

THE JOHN McHUTCHION LIMITED

BRANTFORD, ONTARIO

Trend of Business

Population shows record increase. In the first eight months of 1957 Canada's population rose by 401,000 to 16.7 million at Sept. 1. Year end population totals for the last six years were as follows: 1956, 16.3 million; 1955, 15.9 million; 1954, 15.5 million; 1953, 15.1 million; 1952, 14.7 million; 1951, 14.2 million.

Dividend payments higher despite profit squeeze. Payments this month will likely be almost unchanged from last month but 4.5% ahead of last October. The Nesbitt Thomson index (1935-39 = 100) which estimates industrial, mining, commercial, utility and banking organizations is expected to reach 326.6 vs. 312.5 a year ago. Each month this year has shown marked gains over comparable months last year.

Here's how consumer price indexes rose from coast to coast. Of the 10 regional centres, nine showed increases between August and September. The exception: St. John's (—0.3%). Here's the actual breakdown: Halifax (+0.2%), Saint John (+0.2%), Montreal (+0.5%), Ottawa (+0.6%), Toronto (+0.7%), Winnipeg (+0.4%), Saskatoon-Regina (+0.7%), Edmonton-Calgary (+0.6%), and Vancouver (+0.8%).

Chain stores — a stronger link than ever. Sales in August advanced to $244.6 million, a 13.4% gain over like month last year. Grocery and combination store chains (largest of the group) showed a 20.6% increase. Other increases were: variety, up 10.1%, men's clothing up 3.5%, family clothing up 10.8%, women's clothing up 12.8%, shoes up 15%, hardware up 1.4%, furniture, radio and appliances up 1.8% and drugs up 6.7%. Only declines were: lumber and building material down 14.2%, and jewelry down 4.1%. This brings total chain store sales for the first eight months to $1.7 billion, a 9.8% increase.

Housing construction still below last year. Starts on construction of new dwelling units in the first eight months of this year slipped to 74,390 units, 17.5% below like period last year. Number of completions was 13.7% lower at 67,633 units while number of dwellings under construction at Aug. 31 was 16% lower at 75,076.

But three provinces buck the trend. Dwelling completions during the January-August period were higher in Newfoundland at 782 (729), New Brunswick 1,643 (929) and Saskatchewan 2,095 (1,683). Completions in all other provinces were lower: Prince Edward Island 78 (97), Nova Scotia 1,315 (1,449), Quebec 19,224 (24,370), Ontario 26,191 (30,384), Manitoba 2,252 (3,054), Alberta 5,691 (7,108) and British Columbia 8,362 (8,604).

Building permits reflect construction slowdown. Value of building permits issued by Canadian municipalities in August dropped 18.2% to $143.8 million, from year earlier. Both New Brunswick $3.4 ($2.7) million and Saskatchewan $9.1 ($7.2) million bucked the downward trend. But totals in the other provinces were lower: Newfoundland $513,000 ($917,000), Prince Edward Island $34,000 ($61,000), Nova Scotia $821,000 ($2 million), Quebec $33.8 ($42) million, Ontario $66.8 ($73.1) million, Manitoba $4.7 ($7) million, Alberta $14.6 ($17.9) million, and British Columbia $10.2 ($22.8) million.

Railway car loadings still on downward track. Freight car loadings in September slipped 7.4% from year ago. Only categories showing increases were "other" mine products and miscellaneous carload commodities. The cumulative total for January-September was 5.3% lower. Only increase was "other" mine products.

Electric generation down. Total net generation in August amounted to 6,919 million kwh (—3.2% from previous month). Generation by utilities slipped 4%, while the amount produced by industries rose 0.8%. Hydro plants showed a 4.8% increase and accounted for 91.7% of total generation, balance being produced by thermal plants which registered a 20% increase. Month's imports of electricity from the U.S. were lower at 98.3 million kwh (—13.1%) and exports also lower at 346.8 million (—34.6%).

Major Weekly Indicators

	Latest Week	Week Ago	Month Ago	Year Ago
Department store sales, % from year earlier	+0.8	+7.2	+5.2	+6.9
Carloading totals (cars)	104,606*	87,938	121,840†	105,307*
Eastern Canada (cars)	68,671*	58,634	82,377†	70,637*
Western Canada (cars)	35,935*	29,304	39,463†	34,670*
Iron and steel mfg. (cars)	1,784*	1,472	2,325†	1,782*
Ores, concentrates (cars)	15,561*	12,811	17,772†	17,184*
Base metals (cars)	694*	488	763†	811*
Lumber, timber, plywood (cars)	4,695*	3,999	6,015†	5,127*
Cement (cars)	1,203*	1,042	1,701†	1,239*
Passenger car production (no.)	1,530	1,290	1,169	4,242
Truck production (no.)	632	304	1,012	1,539
Bus. fail., 4-week moving av. (no.)	25.8	23.8	22.5	22.0
Chartered Banks				
Personal Savings ($ millions)	6,178	6,270	6,299	6,046
Loans outstanding ($ millions)	5,390	5,457	5,494	5,290
NHA mtge. holdings ($ millions)	530	530	518	449
Bank of Canada holdings of				
Securities ($ millions)	2,473	2,399	2,499	2,370
Short-term govern. ($ millions)	1,251	1,179	1,279	992
Long-term govern. ($ millions)	1,175	1,173	1,168	1,343
Other securities ($ millions)	12	12	17	17
Canadian dollars (U.S. cents, av.)	103.173	103.379	104.391	102.622
T.S.E. industrial index	413.83	423.15	439.06	473.67
Yield, 14 stocks	5.52	5.39	5.36	4.66
Bank Clearings:				
Montreal ($ millions)	757	1,361	726	673
Toronto ($ millions)	1,026	1,995	918	756

* 9-day end of month period.
† 10-day end of month period.

Facts by the Month

WHAT WE PRODUCE—	Latest Month Available	One Month Previous	Two Months Previous	One Year Previous
In all Industries (Index)	282.4	297.0	289.9	285.5
In factories (Index)	276.2	296.0	288.2	286.1
Total nondurable goods (Index)	243.7	262.8	251.9	240.2
Food & bev. (Index)	280.4	278.6	245.8	269.4
Textiles (Index)			184.7	174.3
Clothing (Index)	137.4	140.7	148.8	139.8
Chemical products (Index)	294.5	320.0	320.7	294.5
Total durable goods (Index)	327.1	348.0	345.1	358.0
Iron & steel products (Index)	308.3	334.6	332.5	322.6
Primary iron & steel (Index)	388.5	407.7	406.5	408.5
From mines (Index)	307.0	307.4	294.9	284.3
Metals (Index)	164.4	166.6	161.2	148.7
Nonferrous smelting, refining (Index)	218.3	213.7	261.0	297.7
Gold (Index)	102.0	103.7	104.8	98.7
—From farms				
Cattle delivered (000)	153	183	139	143
Hogs graded (000)	318	431	382	375
Flour (Index)	120.0	119.3	124.1	137.6
—From sea				
East Coast catch ($000)	7,992	7,503	7,150	8,248
West Coast catch ($000)	6,691	2,453	1,863	9,338
—From forests				
•Newsprint (000 tons)	560	549	532	570
Pulp (000 tons)	892	850	862	923
—In powerhouses				
•Electricity (million kwh. guaranteed)	6,919	7,145	6,798	6,854
WHAT WE SELL—				
Retail sales ($ millions)	1,303	1,233	1,294	1,185
Dept. store sales ($ millions)	93.1	84.0	97.2	91.6
Wholesale sales ($ millions)	671	680	752	661
Mfrs. outstg. orders ($ millions)	2,917	2,927	2,988	2,905
Pass. car sales ($ millions)	41,803	37,833	44,780	51,564
WHAT'S ON HAND—				
Mfrs. inventories ($ millions)	4,824	4,830	4,813	4,392
Dept. store stock sale ratio	2.7	2.8	2.7	3.6
SPENDING, SAVING POWER—				
Labor income ($ millions)	1,307	1,322	1,270	1,223
•Dividend payments (Index) (annual rate)	326.6	326.7	326.2	312.5
JOBS—				
Persons with jobs (000)	5,957	5,949	5,934	5,823
Jobless seeking work (000)	174	163	162	103
Do. (% of labor force)	2.8	2.7	2.7	2.7
CONSTRUCTION—				
Contract awards ($ millions)	338	348	342	430
FOREIGN TRADE—				
Exports ($ millions)	437	449	394	427
•Imports ($ millions)	473	483	455	474
MONEY—				
•Money supply ($ millions)*	11,313	11,174	11,181	11,131
Cheques cashed ($ millions)	19,160	17,440	18,859	17,852
Life insurance sales ($ millions)	328	385	378	257
Notice deposits ($ millions)	6,666	6,630	6,611	6,395
Current public loans ($ millions)	5,570	5,499	5,482	5,299
PRICES—				
Consumer price (Index)	123.3	122.6	121.9	119.0

Index based: production whole sale sales 1935-39=100; consumer price index 1949=100; manufacturers' inventories outstanding orders Dec., 1952=100.
*Total deposits, less Govt. of Canada deposits, less float, plus notes in circulation outside the banking system.

STRATEGIC MATERIALS—Production and Supply—

	Latest Month	Month yr. ago	Yr. to date	% chge. yr. to date
Steel ingots and castings (000 tons)	427.8	441.6	3,109.3	+1.7
•Primary copper (000 tons)	26.3	31.1	194.2	—5.8
Nickel (000 tons)	15.7	15.1	111.1	+6.0
Lumber exports (millions fbm.)	327.5	371.6	1,679.0	—13.5
Lumber (millions fbm.)	735.0	799.3	3,521.0	—10.0

•New item this week.

B.C. Club for Executives Has Novel Financing Plan

From Our Own Correspondent

VANCOUVER — A family club, financed by and catering for young executives and businessmen, is part of a $7.5 million construction project here which is now in the planning stage.

It will be known as the Centennial Club and construction of the 17-story building, which will also include office and hotel accommodation, is scheduled to start next spring.

But the novel feature of the scheme is the financing plan.

The club has been incorporated as society under the Societies Act of B. C. Approximately 100 local men were invited to sign up with founder memberships.

Another 3,000 shareholder memberships are being issued plus a limited number of company memberships and some non-resident memberships and exchange privileges.

The building will be constructed by **The Centennial Building Ltd.**, incorporated as a public limited company under the Companies Act.

Founder memberships cost $1,000, with $100 of the amount buying a lifetime, free founder membership which is non-transferable.

The other $900 will go for an equity interest in The Centennial Building, which interest will be in the form of Class "B" common shares of the **Centennial Building Ltd.**

Sharehold memberships will be about $500, with $300 for the membership itself and $200 for Class "B" common shares.

Dues will probably be $15 monthly for the holder, plus dues of $3, $2 and $1 for the holder's wife and children.

Overlooks Harbor

The building has been designed by **Thompson, Berwick & Pratt**, architects and will be located on a six-lot site overlooking Vancouver harbor.

The basement and the first four floors above street level will belong to the club. Each floor has 150,000 sq. ft. and facilities will include a curling and ice skating rink, racquet sports and handball courts, an Olympic-sized swimming pool, bowling alleys, gymnasia and steam rooms, public and private dining rooms, lounge accommodation with bars and sleeping rooms for members or visitors belonging to affiliated clubs throughout the continent.

On the upper stories, there will be seven or eight floors for office space on lease and at least four floors of hotel suites and rooms.

There will be a large public dining room on the top floor, and a helicopter landing space.

The interim committee handling the preliminary work has also acquired property across the street for a 1,000-car multi-level parking lot.

New Factory Will Produce Mobile Homes

From Our Own Correspondent

WELLAND, Ont. — **Sportscraft Travel Trailers Manufacturing Co.**, with head office in Courtland, Ohio, will operate its first Canadian plant in this city next year.

Under the name **Sportscraft Travel Trailers Co. of Canada**, an 8,000 sq. ft. area building on Pietz Ave., has been leased for a plant which, initially will turn out 10 aluminum 15-ft. house trailers in the $1,000-$1,500 price range each week. They will be fully insulated, seven feet wide, and will sleep five people. Larger units will be built if required.

Existing dealers in Canada will handle sales. Most units in Canada are at present used by construction crews, but the company expects their trailers to gain a place with families as they have in the U. S.

Harold F. Edwards, secretary-manager of Greater Welland Chamber of Commerce, told FP the company checked many cities before coming to Welland.

Canada Safeway Sales Rise 13%

Sales of **Canada Safeway Ltd.**, Winnipeg, subsidiary of **Safeway Stores Inc.**, Oakland, Calif., rose 13.23% to $17.4 million in the four weeks ended Oct. 5 ($15.4 million in comparable period a year earlier).

Sales for the 40 weeks ended Oct. 5, amounted to $163 million ($142 million), up 14.4%.

There were 168 retail stores in Canada in 1957 compared to 155 in 1956.

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TORONTO MONTREAL

SPEECH FROM THE THRONE

A Look at Key Items in Tory Planning

By MICHAEL BARKWAY

OTTAWA (Staff) — The Speech from the Throne read at the opening of Parliament this week gives hints and some concrete signs of the new Conservative Government's plans now that it is in office for the first time.

Without exception, they call for increased federal spending now estimated to reach a new high of **$5.9** billion for fiscal 1957-58.

But the spending will be gradual — most of the plans are still not firm — and implementation therefore will be slow in some cases.

Here's a look at the key items, announced for the first time in history by a reigning monarch, Queen Elizabeth II:

Farm Price Supports

Parity prices for farm products?

Farmers are already reading this into the Throne Speech. The Speech talks of "a measure to provide greater stability in (farm) prices" and of assuring farmers "a fair share of national income."

But the Conservatives have actually not made up their minds and as the weeks go by, there are indications they see the uneconomic realities in a system which through Government interference tries to keep farm prices at some theoretical level so that the farmer stays as well off as some other Canadian group.

They are now casting about for other ways to help the farmer, avoid the parity system which in the U. S. has led to billions of dollars in government subsidies and huge agricultural surpluses.

The official phrasing this week is purposefully vague. "Stability," though the farmer probably wouldn't agree, can mean steady but low prices, the definition of "fair income" is a matter of opinion.

Being studied:

At least a drastic overhaul of present price supports legislation brought in 1944 (at a net cost after 10 years of about $80 million). Though all farm products are eligible, few, outside of dairy products and hogs, were supported until this year.

Wider use of special credit facilities to farmers under the Farm Loan Act. Supervised young farmers might get up to $20,000 (instead of $15,000) repayable in 30 years at about the same 5½% interest rate.

Increased tariffs to aid fruit and vegetable farmers whose products cannot be supported (because they can't be stored).

Cash Advances

The much-publicized new program to enable Prairie farmers to get a cash advance on grain stored on the farm is almost complete.

Behind-the-Scenes Report From Ottawa

As explained in **FP** in late July, advances will be made in the fall only on grain (wheat, oats and barley) which can be delivered in the following spring.

Calculation of eligible quantities involves a complicated formula.

Advances will be made by the Wheat Board (in spite of last year's statement by Mr. Howe that the Board would rather resign than have anything to do with them). The Board will get the necessary funds by borrowing from the banks, as it already has power to do; but in this case legislation will be necessary to enable the government to pick up the bill for interest on the loans.

Insurance Act Changes

Several minor improvements in the law governing insurance companies, which have been under consideration for some time, will be included in the amendments to the insurance acts.

But the point of greatest interest will be the provisions designed to check the growing attempt by U. S. interests to get control of Canadian companies.

Several alternatives have been discussed in **FP** (April 6 and July 27).

A more far-reaching proposal — for legislation that any future shares acquired by non-residents should have no voting rights — was proposed by the Gordon Commission.

FP understands that the Government has refused to go as far as the Gordon Commission recommended. Its amendments are not drastic, but it's hoped they will discourage U. S. raids on Canadian companies.

At least, it can be taken for granted, they will enable Canadian insurance companies to follow the plan proposed by **Manufacturers' Life**, and buy up their own shares.

Spending and Taxes

Clear hint that Finance Minister Fleming will not produce a formal budget at this session of Parliament is seen in references to taxation in the Throne speech.

Promise of tax changes is also made definite in the words, "changes in some of the taxing statutes." While this is completely vague, tax cuts were promised in the election campaign, and the promise was repeated the other day by Mr. Diefenbaker.

One of the reasons for having a formal budget is that it is always given after stock exchanges and business houses have closed for the day, and tax changes announced then to take effect at midnight do not leave room for any quick profit-making deals.

Without a budget Mr. Fleming will have to make sure that no changes in commodity taxes are made except in similar conditions. But if he confines his changes to income taxes, as seems probable, it won't matter much when he announces them.

By not having a budget, Mr. Fleming may escape having to give a formal review of the economy. He will have to show the status of the government's account in the form of some sort of balance sheet, but this could be presented merely as a statistical table.

Social Security

More money for senior citizens.

In line with campaign promises the Conservatives are now pledged officially to raise federal old age security pensions from their present no strings attached $46 a month at age 70.

Current annual expenditure is now running just under $400 million. To increase the pension by $1 a month would cost the Treasury $10 million.

Last spring, the Liberals in office raised it from $40 to $46. It has been expected that the Conservatives will raise it again to $55 but this would mean at least a whopping $107 million if, as indicated in the Throne Speech the federal share of the federal provincial payments under old age assistance, blind, and disabled persons acts are raised to "a corresponding level."

The increase, therefore, may bring the total to $50 a month.

Assistance programs now cost about $21 million for the 65-69 needy age group, $3 million for the blind, and $8 million for the disabled.

But because they are a joint federal-provincial arrangement, the federal government is in a different position.

Present scales have the same $46 a month payment in mind. Thus the federal government pays 50% (to a maximum of $23) in both the old age assistance and blind schemes, 75% in the disabled.

It would be logical for the federal government to raise its share of total payments from the 50% and 75% levels to percentages sufficient to cover the difference between $46 and the new amount.

Periods of residence required for eligibility for the old age pension is to be shortened. Likelihood is that it will be lowered from 20 years to 10, in line with present qualification for the federal-provincial allowances.

Additional cost here would not be significant. There were few immigrants between 1938 and 1948 because of World War II, and few of these would now be old enough to be added to rolls.

Provincial Projects

Since coming into office, the government has found out in more detail that the country's resources and, therefore, projects to develop them, are subject to the wishes of the provinces under the constitution.

Thus federal ambitions must be tailored accordingly.

But with several promises carrying around projects too big for their finances in their briefcases, the Conservative government has put out the financial welcome mat over the Ottawa archway. And the sign over the door reads: National Development Policy.

What the policy is — other than handing out federal funds — has not yet been announced, or probably thought through.

But two provinces are already waiting in the office and a third is coming up the walk.

The projects:

Maritime power. A thermal plant in Nova Scotia to supply power for that province and New Brunswick at a $10-$12 million estimated cost, and a 50-megawatt installation at Saint John, N.B. Both had been agreed to by the old Liberal government.

Federal financial help for the Beechwood power project on the Saint-John river. Liberals had refused; Conservatives now accept.

Saskatchewan dam. Long-sought by the prairie province but deemed uneconomic by the Liberals, it will be the subject of new federal provincial discussions.

Vacations with Pay

Most of the approximately 250,000 workers in industries under federal jurisdiction (i.e. railways, banks, Crown corporations) get vacations with pay as part of their terms of employment or through collective bargaining agreements.

But there's no federal legislation on the subject.

Now, the government proposes to plug the gap. It is expected to provide for at least one week of vacation after the first year's work — in line with most provincial legislation.

British Columbia and Saskatchewan require employers to grant two weeks; New Brunswick (construction and mining only) Quebec, Ontario, Manitoba and Alberta, one week; Prince Edward Island, Nova Scotia and Newfoundland, no provision.

Vacations with pay, however, though added to other federal laws concerning pay for women, collective bargaining, fair hours and employment, goes only part of the way toward satisfying big labor's current demands.

Next week, the Canadian Labor Congress will have its annual session with government officials, also ask for legislation to:

1. Fix maximum hours of work per week at 40;
2. Set minimum wage at $1 per hour;
3. Provide for eight statutory holidays with pay per year.

Look For It Here

October 19, 1957

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Cdn. Oil Sells Valley Holdings

From Our Own Correspondent

CALGARY — Three Calgary based companies have purchased holdings in Turner Valley from **Canadian Oil Companies Ltd.**

Westburne Oil Development, Western Decalta Petroleum and **Petrol Oil and Gas** companies purchased the holdings that were formerly owned by **Anglo-Canadian Oil Co.** which Canadian Oil Cos. had taken over in 1955. The amount involved was undisclosed.

Westburne will have 50% interest in the holdings, Western Decalta 37.5% and Petrol, 12.5%.

RESIGNS FROM BOARD

Principal W. A. MacKintosh has announced that at its fall meeting Oct. 11, the board of trustees of Queen's University at Kingston accepted the resignation of Hon. J. M. MacDonnell as chairman of the board. Mr. MacDonnell feels that his duties as federal minister and as a member of the House of Commons prevent him from performing fully the duties of chairman. He will continue as a member of the board of trustees.

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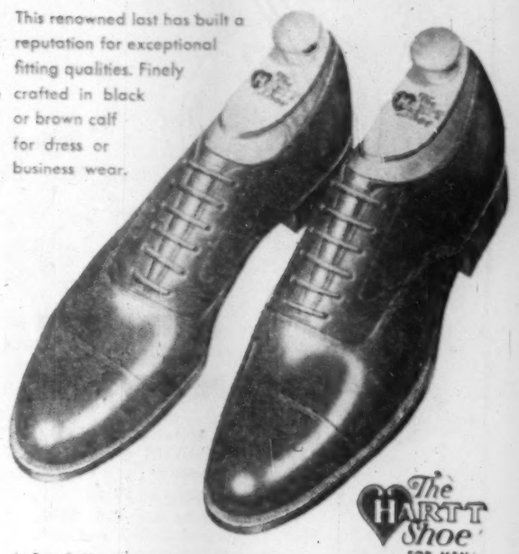

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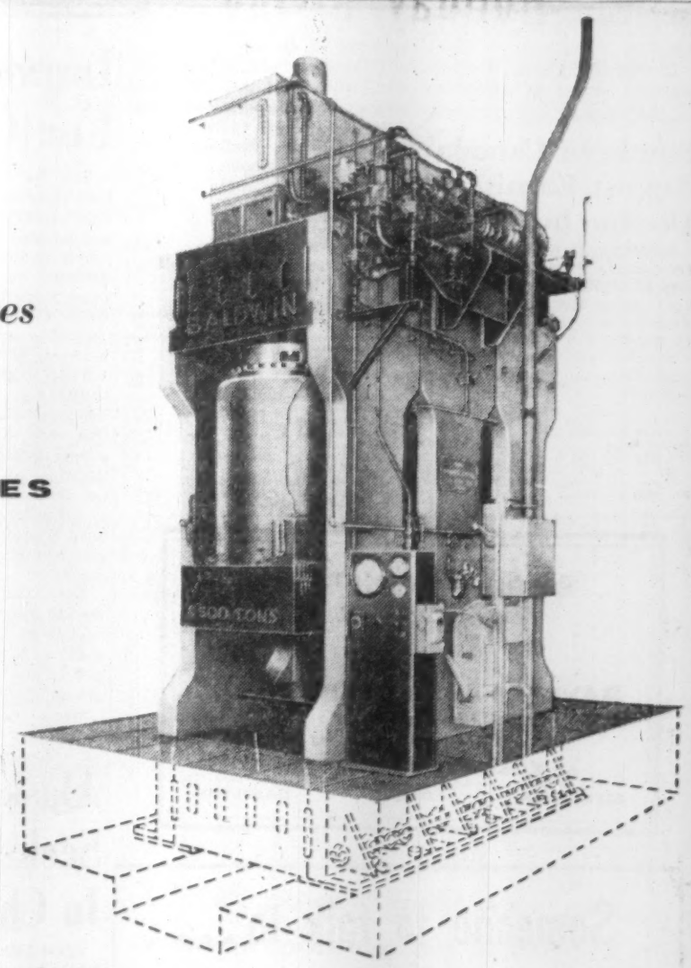
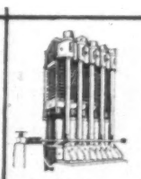


835 ton Hy-Speed Pulp Baling Press.

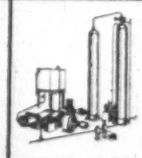


7,000 ton Hardboard Press

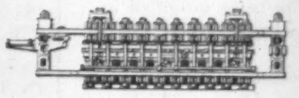
300 ton Shell Forging Press

6,500 ton United Steel built Baldwin Hydraulic Press for fabricating "Asbestos-Cement" board.

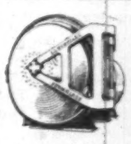
5,000 ton Forging Press



Hydraulic Hydro-Pneumatic Accumulators



5,200 ton 72 inch x 36 ft. Conveyor Belt Curing Press



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Why They're Moving

Facts and comment on what's going on in the market and rumors behind some of the moves.

By FRANK KAPLAN

Newsprint stocks, as one of Canada's major exporting industries, stand to benefit from declines in the world market value of the Canadian dollar from a recent $1.06 high to a premium of about 3½ cents.

Illustrating the impact of the rise in dollar premium which occurred through most of the year is the nine-month report of **Consolidated Paper.** This company suffered an additional loss on exchange equal to 22c a share and profit per share slipped to $1.89 from $2.32 in the first nine months of 1956.

Despite the sharp bite of the dollar premium, impact of the tendency to lower production in the industry and higher costs which resulted in an acceleration of the rate of profit decline in the third quarter, coverage of annual dividends appears assured this year.

	Latest Price	Late Sept.	1957 High	1957 Low	Indic. Yield
	$	$	$	$	%
Abitibi	27½	27¾	35½	25¼	6.18
Anglo-Newfoundland	5½	5¾	10¼	5½	5.45
Cons. Paper	28½	29¾	39½	27½	7.02
Fraser	23	23½	34	23	7.39
Great Lakes	33¾	35	47½	33	4.74
Powell River	33½	33⅜	46½	33	5.37
Price	43½	43	59	42¼	6.90
St. Lawrence	13⅜	14	18¾	13¼	7.50

THE STREET IS TALKING ABOUT—the strength of the rebound on Wall Street following a series of sharp declines. However, Canadian issues generally lag on the recovery move.

A few exceptions are among issues also listed in New York and which have large U.S. investor followings. **Aluminium** bounces back to $33 after hitting $30⅞, still down about $2 in about two weeks. **Imperial Oil** comes back from $38¼ to $39½ but remains well below a recent $43.

Standout against the market is **Hiram Walkers** which bounces to $71¾ for a $2 gain in less than a week as company announces intention to split stock.

* * *

One of the heaviest losers is former favorite **Trans Mountain Pipe Line** which earlier this year sold at $145. Stock drops to $62½ for a loss of $14 in two weeks as reports indicate further drops in throughput.

The Montreal Canadiens hockey team has supporters in the financial world. **Canadian Arena,** the company which controls the club, reports a drop in net profit of 10% in the year ended June 30, but stock climbs to $152 from earlier $125 level. These shares are traded infrequently but a few blocks have changed hands since control of the company moved to the Molson family.

* * *

OTHER MARKETS—Over-the-counter markets mirror decline and recovery on Wall Street more closely than listed issues. Pipeline issues continue to dominate with life insurance issues encountering some selling pressure as buyers back away.

Great West Life sags about $10 with bids very weak. Nominal market would be about $205 to $215. **Manufacturers** slightly easier at about $213. These issues reflect sag in U.S. insurance stocks.

Among pipelines, **Westcoast** at $29-$29½ is ahead about $1 on the week as plans for expansion of the new line already underway. **Trans-Canada** common firms fractionally to $26-$26½ but drops to $25 at mid-week on reports that the pipeline project may be studied by a Royal Commission on energy. The units sag $3 to $122-$125.

Quebec Natural Gas common is unchanged at $17-$18 as the issue recovers from the market slump. Units slip back about $2 to $113-$116. **Northern Ontario** common weakens about $1 at $10½-$11½. **Alberta Trunk** holds steady at $13¾-$14¼.

Newsprint Down Again With Lower U. S. Demand

MONTREAL (Staff) — With U. S. newsprint consumption almost level with last year, operating ratio of Canadian mills decreased to 91.1% of capacity at the end of September from 105.4% of a smaller capacity in the same month in 1956 and 95.1% last month.

For the first nine months, operating ratio of Canadian mills has averaged 97.4% of capacity compared with 102.9% a year ago.

September production of newsprint in Canada was down 5.3% at 486,590 tons compared with a year earlier. On the year to date, output is up 2% at about 4,908,000 tons.

Reason for the decline is reflected in U. S. consumption which is off 0.1% on the month at 575,208 tons and, in the first nine months, off 0.7% at 5,025,683 tons.

U. S. mills are also feeling the decrease in customer demands. Production is down 4.8% on the month at 133,776 tons although still up 9.2% in the first nine months at 1,400,030 tons.

U. S. consumers' stocks are still at the high level of 1,125,211 tons or 55 days' supply, an increase of 24% over the same time last year when they amounted to 44 days' supply. However, end of September stocks are the equivalent of three days less than at the end of August this year. Because of normally stronger demand in the fall, inventories should decrease again this month.

It now looks as though total shipments from Canadian mills will definitely be less this year. For the month, they were down 3% at 512,882 tons compared with the same month of 1956. On the year to date, they are down 1.1% at 4,827,834 tons.

Shipments to the U. S. in September were 5.1% lower at 403,377 tons and in the first nine months off 1.1% at 3,832,051 tons.

With one-quarter of the year still to go, shipments to the U. S. might be down 2% or 100,000 tons for the full year, observers think.

While shipments overseas are up sharply—13.9% in September at 73,368 tons and 17.8% at 644,325 tons in the first nine months — these shipments are small compared to those going to the U. S.

Consol. Paper Net Down 18%

MONTREAL (Staff) — Unaudited net profit of **Consolidated Paper Corp.** and subsidiary companies for the nine months ended Sept. 30, 1957, was $9,722,125 or $1.89 per share ($11,888,099 or $2.32 per share in the like period of 1956), an 18.2% drop.

The increased loss on U. S. exchange in the current period is equivalent to 22c per share after income taxes.

First half net amounted to $1.35 ($1.53) a share.

Consolidated statement follows:

Nine mos. to Sept. 30:	1957 $	1956 $
Net earnings	25,174,428	26,367,274
Less: Exchange loss	2,850,229	680,337
Depr. & depl.	3,524,360	3,080,496
Income taxes	9,077,714	10,718,342
Net profit	9,722,125	11,888,099

B.C. Expansion By Distillers

MONTREAL (Staff) — **Distillers Corp.-Seagrams Ltd.** will undertake a $2 million expansion at its New Westminster, B.C. plant, designed to increase "substantially" company's west coast bottling and blending capacity.

Program will be carried out in three stages and will take about 18 months to complete. First stage is construction of a new dumping and blending building to be followed by expansion of bottling facilities. Third and final stage is extension of office and general administrative facilities.

Distilling capacity of the plant will not be affected by the changes.

Expansion program was required to meet growing demand in western Canada and increasing export sales, particularly in the western U. S. and various Asian countries, company reports.

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Canadian Petrofina Pays First Dividend

MONTREAL (Staff)—**Canadian Petrofina Ltd.** will pay its 1st dividends to ordinary and preferred shareholders on the basis of six shares of participating preferred stock for each 100 shares of preferred and each 1,000 ordinary shares held.

Stock dividend is payable Nov. 27 to holders of record Nov. 6. Scrip or fractional share certificates will be issued where necessary.

The 20 million $1 par ordinary stock authorized and outstanding is held by the parent company, **Compagnie Financiere Belge Des Petroles "Petrofina," S.A.** At Oct. 4, there were 5,498,736 preferred shares outstanding.

Dividend is equivalent to payment on both the $1 par ordinary shares and the $10 par value preferred dividend at the stipulated rate of 6% for the non-cumulative participating preferred.

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Commonwealth Internat. Assets Off 8% in Quarter

MONTREAL (Staff) — **Commonwealth International Corp.** net assets at Sept. 30 totaled **$10,545,014** or $6.62 per share (ex-dividend) off 7.8% from $11,446,627 or $7.70 per share at June 30.

During the quarter, the fund acquired shares in seven new issues, added to its holdings of one other and reduced holdings of two issues.

By the end of the quarter, the fund's holdings in oil securities had risen to 7.53% of total assets (5.35% on June 30).

Holdings of bonds, net cash, etc., rose to 14.48% (10.28%) and merchandising securities increased to 5.04% (4.80%).

Among the declines were: Pulp and paper, 10.41% (11.80%); base metals, 8.96% (11.96%); and public utilities, 5.14% (5.71%).

Here are the portfolio changes during the three months ended Sept. 30, 1957:

Common Stocks	Shares held at Sept. 30	Change since June 30
Bathurst Power & Paper A	3,300	—325
Canadian Oil	1,300	+1,300
Dominion Bridge	2,000	+2,000
Gulf Oil	500	+500
Hudson Bay, M. & S.	3,000	—2,725
McColl-Frontenac	4,000	+1,000
Sacony Mobil Oil	1,000	+1,000
Standard Oil of N.J.	1,000	+1,000
Texas Co.	1,000	+1,000
George Westons A	2,000	+2,000
Foundation Co. (1)	5,000	+500

(1) Through exercise of 2,000 rights. Note: Fund also sold 1,000 Bell Tel. rights.

11 months ended Aug. 30	1957 $	1956 $
Gross earnings	10,192,819	9,155,010
Less: Exps. incl. int. & dep.	6,544,788	5,698,022
Taxes	1,815,304	1,716,427
Net profit	1,832,727	1,740,561

Southern Canada August Earnings Decline by 9%

MONTREAL (Staff) — **Southern Canada Power Co.** net profit was $1,832,727 ($1,740,561 a year ago), down 5.3%. Net profit for August this year was $142,717 ($156,806), a 9% decline.

Surplus for the 11 months amounted to $461,189 against $460,690.

October Investor's Review

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Important Savings Possible For Canadian Taxpayers?

The tax advantages of married couples being able to split their income and file separate tax returns — even where the whole income is earned by the husband — are illustrated in (one examples prepared by **CCH Canadian Ltd.,** national reporting authority on tax and business law.

The possibility of income splitting arises from an Income Tax Appeal Board decision (**FP,** Oct. 12), which ruled that a couple domiciled in Quebec at the time of marriage came under that province's "community of property law." Husband and wife, therefore, were each subject to tax on one-half of their income.

If Ottawa doesn't win its repeated appeals of the decision, a general demand for application of the income-splitting procedure to all provinces appears likely.

Some of the saving might disappear, of course, to the extent that tax rates might be increased to offset the revenue loss.

In the U.S., all married persons may combine their income and divide it equally for tax purposes.

Break-even point is $3,000 income for Canadian taxpayers; as the income increases, the advantage becomes greater:

Income	TOTAL TAX Eligible Quebecker	Ordinary Taxpayer
$	$	$
3,000	150	150
3,500	225	235
4,000	300	320
5,000	470	510
10,000	1,360	1,360
15,000	2,400	3,160
25,000	5,230	7,360

Here is an example of the application of the above figures:

A married taxpayer, with $10,000 income, reports $5,000 as income, forfeits the $2,000 married exemption, takes a $1,000 exemption, and pays tax on $4,000.

His wife takes another $1,000 exemption and pays tax on the remaining $4,000. This results in a lower tax bracket for the $8,000 of taxable income.

(If the Quebec couple signed a marriage contract, making them separate as to property, they do not qualify under the community-of-property law.)

Alaska-Yukon Seeks Change In Charter

MONTREAL (Staff) — **Alaska-Yukon Refiners & Distributors Ltd.** has applied to Parliament for revision of its charter to remove a technicality impeding progress of the company's proposed far north $15 million refinery and pipeline project (**FP** Jan. 26, 1957).

The charter contains a provision requiring the main pipeline or lines for transmission of gas or oil to be located in Canada.

Some 50 miles of the proposed pipeline, however, runs through the U. S. territory of Alaska.

Company officials report that the Board of Transport Commissioners when considering the pipeline application, held the 50 mile U. S. portion of the line was part of the "main line" and thus dismussed the application (with right to reapply) on the grounds that it was inconsistent with the company's charter.

The application now being made to Parliament by Alaska-Yukon in effect seeks to remove the "located in Canada" requirement.

Imp'l. Investment Profit Up 73%

An increase in the Class A capitalization of **Imperial Investment Corp.,** from 500,000 to one million npv non-voting shares, has been approved by shareholders.

Maximum price at which this stock may be offered is $18 per share. Recent market price: $10¾.

Net profit in July and August, first two months of the Vancouver company's current fiscal year, totaled $129,742, up 73.2% from $74,894 in the same two months of 1956. Net profit for the full 1956-57 fiscal year was $361,853 or $1.34 per share (**FP,** Oct. 5).

Number of Class A shares outstanding has increased from 133,258 at June 30, 1956, to 267,755 at Sept. 30, 1957, with a further 169,243 reserve to provide for various warrants, conversion privileges and option agreements.

Cost of money has increased to 36.37c per income dollar, from 21.78c two years ago, said President Peter Paul Saunders.

Increase in capital was made necessary by company's rapid expansion, said the president. Addition of 500,000 more Class A shares will enable company to take care of anticipated future growth.

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Airlines' Business Sets Record

MONTREAL (Staff)—International Airlines' business transactions settled through the International Air Transport Association clearing house at London—the barometer of airline activity—increased by more than 30% in the first half of this year.

Total turnover for the period exceeded $281.6 million as opposed to $216.3 million for the first half of 1956.

Clearance facilities through the clearing house were provided for 60 of IATA's 78 member airlines, and for 19 non-IATA carriers in the U. S. via interclearance agreements with the Airlines' Clearing House at Washington.

Clearances with the Washington House are reported up 31% over the comparable period of a year ago for a six-month total of $11.9 million.

The monthly turnover of inter-line accounts set successive new records in each of the last three months of the half year when two-way settlements totaling $47.7 million, $51.8 million and $55.3 million were achieved for April, May and June respectively.

Previous record: A $47.6 million turnover in Oct. 1956.

Offsetting the credit against the debit accounts of members eliminated the necessity for payment of 89% of accounts cleared through IATA during the period ending June 30.

FORECASTING BUSINESS

By PAUL S. DEACON

Stock Market a Barometer?

High Interest Rates Big Factor in Stock Decline

Making sense out of gyrating market prices is often difficult. Some people contend they don't make any sense at all.

Early this year, for instance, when the stock market was weak, one official of a Canadian company undertaking an important expansion program complained that the pessimism evident in stock prices was entirely unrealistic.

We said we thought the market was more worried about earnings and tight money than the general level of business at that time.

"Nonsense," he said. "We wouldn't be going ahead with our new projects if we didn't feel confident we could make as good a return on them as we do on our present plants."

Since this conversation, the market has varied a great deal. It climbed in the spring, also had a burst of strength this summer. If investors were worrying about the things we suggested, it wasn't particularly evident during these rallies.

Looking back, however, the pattern is interesting to the observer attempting to interpret market action.

How Market Has Moved Since 1956

Since the summer of 1956, for instance, stock prices have declined 20%-25%. The drop in the Montreal Stock Exchange industrials in this period was 27.6% from the record high early in August 1956. The drop in the Toronto Stock Exchange industrials from its record high set about the same time has been 18.5%.

Most of this decline can be explained in terms of changing interest rates.

Average yield on bonds has risen to about 5½% from 4½% during this period, based on the **McLeod, Young, Weir & Co.** compilation. And average yield on common stocks, as calculated by **Moss, Lawson & Co.**, is now about 5% against 4% in mid-1956.

An investor in mid-1956 was willing to pay $100 for a $4 dividend. Now he will pay only $80—20% less.

Thus even though 1957 will undoubtedly prove to be our best year to date for general business activity, as measured by such indicators as gross national product, capital expenditures, consumer expenditures, etc., from an investor's viewpoint this hasn't cut much ice.

Earnings have not grown, despite the active level of business. While there has been some increase in dividends (reflecting to some extent good 1956 results rather than 1957), for the most part investors could only get a yield in line with the new higher interest rates by paying less for the same dividend.

Depending on the index you use, it's also evident that less favorable profit conditions have had some part in the decline in stock prices, even though interest rate trends can explain the major part.

First Half Shows Profit Picture

First half results of Canadian companies as published by the Dominion Bureau of Statistics show the profit situation clearly.

Combined sales of manufacturing companies in the six month period were 4½% ahead of the 1956 first half. Combined net profits, however, were down 7.2%.

The drop in profit margins can be shown in another way: Net profits were $4.36 per $100 of sales in the 1956 half; only $3.87 in the 1957 half.

With the stock market down in recent days, the bond market has been showing signs of strength. Most Government of Canada issues since mid-September have risen at least half a point, and one or two issues more than a point. Few dealers are calling for an immediate bull market in bonds—there have been some false starts before—but the mood at the moment is certainly more optimistic.

Why Bonds Up, Stocks Down

What could account for this difference in direction in stocks and bonds?

One investment man suggests this explanation:

- Investors in bonds have decided that the major governments continue to regard inflation as a major problem, and are unwilling to ease money until there's good evidence that price increases have really been beaten. Investors believe inflation is being beaten through this policy, and are therefore not so anxious to demand higher interest rates to offset the loss in purchasing power that seemed inevitable before.
- Stock prices have been weaker because the anti-inflation program will reduce business activity further before money can be made easier. They won't improve, it's argued, until a switch to encourage business activity is evident.

There are other possible explanations. One is that money is already being eased somewhat in Canada and may be eased before long in the U. S. because of evidence of a business downturn in some fields. Another is that financing requirements of the Canadian government are such that a more receptive bond market would be helpful in the next few months.

Whatever the explanation, it looks as though there will have to be some improvement in bond prices before any real strengthening in stock prices can take place.

Is Tight Money Policy Working?

What evidence is there that the tight money policy is working?

Wholesale prices of industrial materials have dropped 6% since January, according to latest DBS figures. The consumer price index has risen 4% in a year, in September was at a record high (due partly to seasonal factors). But wholesale prices were rising for nearly a year before the consumer index began to climb, and if this pattern is repeated on the downside, consumer prices could start to show a decline within a fairly short time.

If, despite its intermediate fluctuations, the stock market's performance has been reasonable in the light of what has actually happened, present market prices undoubtedly suggest that business won't be as prosperous as it has been.

But even though the drop has been considerable, the implied forecast contained in the trend of stock prices so far doesn't amount to a prediction of a serious drop in business.

It has adjusted for the rise in interest rates and for a decline in profitability. It also seems to expect some drop in business.

But unless it declines much further, the level of activity it apparently expects would be relatively pleasant to contemplate by any normal yardsticks.

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Lakeland Gas Rushing Work

Work is proceeding rapidly on **Lakeland Natural Gas Ltd.'s** local municipal gas systems. Installation crews are at work in Cornwall, Port Hope and Belleville and a fourth spread is moving into Gananoque.

The installation program calls for systems in the larger centres in company's distribution area from Port Hope to Cornwall to be ready for a turn on of gas by the first of the year.

An interim supply of gas, for which the company has contracted from **Trans-Canada Pipe Lines**, is expected to be ready then.

Construction work on the municipal gas distribution systems is handled by **Donovan Construction Co. of Canada** with design of the systems and engineering supervision under **Commonwealth Services, Inc.**, of New York.

Dividend Changes

PROVINCIAL BANK OF CANADA—Common, 20c plus 20c payable Nov. 2; to holders of record Oct. 15. Total paid or payable to date in 1957, 76c plus 20c; total paid to same date in 1956, 72c plus 15c; total paid in 1956, 72c plus 15c.

INVESTORS MUTUAL OF CANADA—Special and common, 10c payable Nov. 14 to holders of record Oct. 31. Total paid or payable to date in 1957, 32c; total paid to same date in 1956, 31c; total paid in 1956, 31c. Recent price: $9.09 bid, $9.82 asked.

CANADIAN PETROFINA — 6% non-cumulative participating preferred, stock dividend of six preferred shares for each 100 preferred shares held, payable Nov. 27 to holders of record Nov. 6. Recent price: $18⅛.

Ordinary, stock dividend of 6 preferred shares for each 1,000 ordinary shares held, payable Nov. 27 to holders of record Nov. 6.

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Combines Hearing Nov. 5 For 17 Paperboard Firms

MONTREAL (Staff) — Major companies in Canada's paper board industry charged with combining to restrain competition from 1934 to 1953 inclusive in some of their lines, have been ordered to appear in court Nov. 5.

Fifteen manufacturers and two sales companies of producers were charged. The court has given authority for the RCMP to issue summonses for them to appear.

Under the old code in force before April 1, 1955, the penalty was a maximum of $10,000 and a minimum of $1,000 for each company, if convicted.

Now there is no maximum and the court may impose whatever penalty it deems fit if the companies are convicted.

The 17 summonses are against:

Bathurst Power & Paper Co.
Beaver Wood Fibre Co.
Consolidated Paper Sales Ltd. (formerly known as **St. Maurice Valley Paper Ltd.**).
Consolidated Paper Corp.
E. B. Eddy Co.
Fraser Cos.
Gair Co. of Canada Ltd.
Hinde & Dauch Paper Co.
Howard Smith Paper Mills Ltd.
Minas Basin Pulp & Paper Co.
Northeastern Paper Products Ltd.
Anglo-Canadian Pulp & Paper Mills Ltd.
Miller Brothers Co.
Price Brothers Sales Corp.
Price Brothers & Co.
St. Lawrence Corp.
Strathcona Paper Co.

It is charged they did "unlawfully . . conspire, . . combine, agree or arrange together and one another with:"

Board Sales Ltd.
Dominion Paper board Ltd.
J. R. Booth Ltd.
Brompton Pulp & Paper Co.
Dominion Boxboards Ltd.
Certain-Teed Products Corp.
George S. Pincott and **William H. O'Reilly**, "to prevent or lessen, unduly, competition in the production, manufacture, purchase, barter, sale, transportation, or supply in the city of Montreal and in all other places throughout those provinces of Canada lying to the east of the province of Saskatchewan where the articles or commodities were offered for sale."

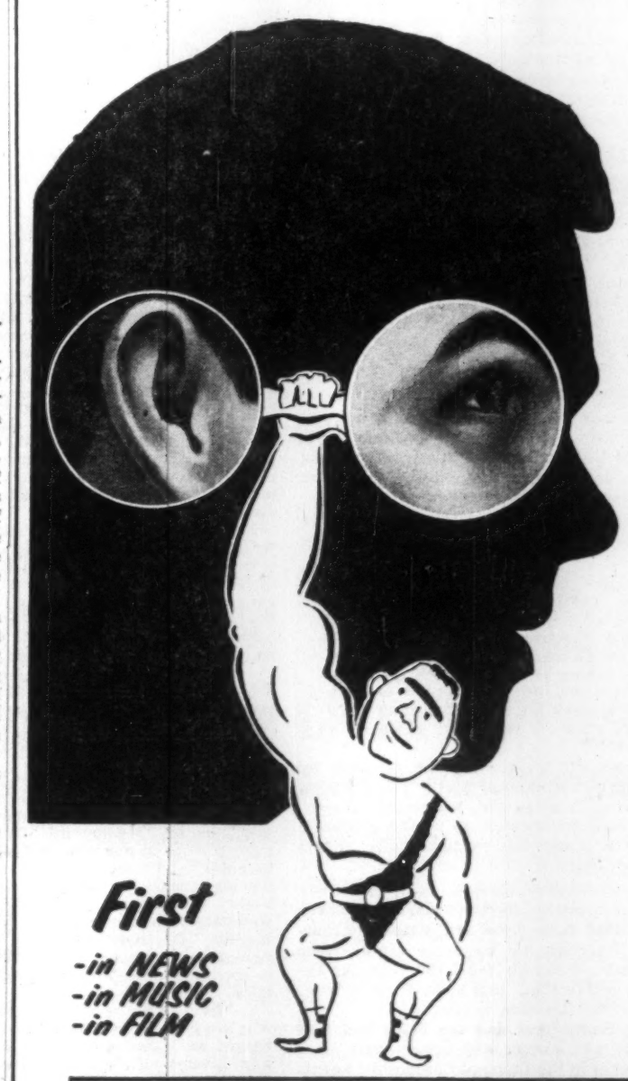
The grades of paper cited in the charges are: Boxboard grades of paperboard, including non-bending grades, bending grades, newsprint wrappers and miscellaneous boards, being all those paperboard products manufactured and sold in Canada by the accused companies with the exception of paperboard in rolls for the manufacture of fibre wallboard for the producers' own processing in Canada; container board produced for and sold to manufacturers of shipping cases; ticket bristol; tag board; index board; bristol board; blanks; playing card stock; board for paper milk containers panel board for the automobile industry; calendar mounts and silk wrapper.

Correction

Legal procedure for obtaining access to Ontario corporation shareholder lists was described incorrectly in **FP**, Sept. 28.

If an individual wishes to see the list of his fellow shareholders in a company, he must swear out an affidavit to the effect that he will not make improper use of the list, e.g. for "sucker list" use.

If he later violates this undertaking, he is subject to a fine of up to $1,000.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Hope for Housing

All Canadians will be glad to see the Canadian Construction Association settle down next month to find a way to provide houses that can be bought by Canadians with incomes of less than $5,000 a year. These are the men with the information and experience necessary to do the job.

There are only three ways to get the cost of housing down. One is to reduce the cost of financing. At the moment, this seems a pretty unrealistic goal. Money is scarce and other uses are clamoring for it. Short of subsidy, housing has to pay the going rate. Just about every indirect method of reducing financing costs has already been put into operation.

The second way to get housing prices down would be to reduce land costs. There may be some hope for relief from land tax if municipalities get a better tax deal this fall; but it's a slim hope, and it's offset by the virtual disappearance of serviced land in most areas. Municipalities will have to incur heavy expenses to open up additional areas for housing — and that means higher taxes.

The only remaining way to bring house prices down is to reduce the cost of the house itself. There's been a lot of lip-service paid to this idea since the end of the war, and a few successful stripped-down Model-T houses were actually built. But the vast majority of homes have been loaded with gimmicks, built by methods that date back to the twenties, and priced for the above-average income.

This is not very surprising. The market for housing was buoyant, and most buyers wanted a relatively conventional house with all the built-in gadgets supplied. Only a builder with holes in his head would have spent the time and money necessary to develop something the customer didn't want.

Now, however, the upper-income housing market appears to be narrowing, partly due to shifts in our pattern of population. This is the moment for real attention to the problem of designing and producing a low-cost livable house. The middle-income and low-income market can pay off in volume what it hasn't got in ability to pay high unit prices. The builder who can tap this market will never be crying the blues.

Blast From New York

A few Canadians may have been vaguely interested in a great noisy blast hurled at this country as a hang-out and haven for stock swindlers specializing in the bilking of Americans.

The speaker was Louis Lefkowitz, New York Attorney General.

Why did he make the blast?

Key to the answer is that Mr. Lefkowitz has to get elected to his job soon, so this was an election speech.

Canadians may be pardoned if they prefer their own system of having appointed rather than elected officials do the important and often unpopular jobs of public administration.

He Would Be Surprised

It was just a hundred years ago this fall that Captain John Palliser, sent out by the British Government to size up the country between Upper Canada and the Rockies, started to write his famous report. From a point not so many miles southeast from where today a big modern hotel carries his name, Palliser jotted down in his journal: "Nothing but desolate plains meet the view."

Palliser was an Old Country man, accustomed to the mild, moist climate and greenery of Britain and it must have been a dry year when he traveled through Southern Alberta. At any rate his impression of much of that country was not flattering. He could see very little future for what has since become a flourishing and prosperous region. What a surprise it would be for him to see the wealth and variety of production from this area today.

Actually many of the early estimates of Canada were discouraging probably because these first explorers found a country so completely different from what they were used to. But they failed to stop us.

Why India Stays In

One of the remarkable facts of world politics is that independent India remains a member of the British Commonwealth. This is true also of Pakistan, Ceylon, Malaya and Ghana.

Why has India stayed in the family? Here is part of a recent answer:

> There are more Englishmen in India today than there were in the heyday of British rule. There is more appreciation today of British thought and ways of life than there ever was in the past . . . The basic cause of India's staying in the Commonwealth is in the realm of ideas and attitudes rather than that of commodities and services . . . The Congress party fought the British but has faithfully adopted the political and legal constitutions that are the proudest part of the British heritage . . . Its leader Mr. Nehru is the stoutest champion of the British connection . . . I believe that the Commonwealth will grow in numbers and prestige . . . The Commonwealth will stand for racial equality, peace among nations and economic development of the underdeveloped countries of the world . . . The empire, to the extent that it remains a memory, will be a selective memory of pleasant things characteristic of the best of British culture and civilization . . . In such a Commonwealth Britain will rank as leader by virtue of her seniority and of her contributions, political and economic, to the welfare of the peoples of the Commonwealth.

This is not a right-wing British Tory speaking. The sentences quoted are from an article by Dr. V. K. R. V. Rao, Indian economist and diplomat. It appears in "Caravan of India," published by Mr. Nehru's government and distributed by the Indian information service, Ottawa. What Dr. Rao says is worth pondering by anyone who questions whether the Commonwealth has purpose or value.

Sputnik or Spuds?

We wonder what the Russian peasants — the ordinary guys — think of sputnik, their earth satellite.

"Sputnik-shmutnik," he may say "—an earth satellite is all very well — but can we eat it?"

Sputnik was launched within a few days of the announcement of a new economic program for Russia's domestic economy — a program that turns out to be the five-year plan stretched over seven and a half years. The Russian consumer will have to wait 50% longer for the improvement in domestic supplies that he was promised, with much fanfare, last year.

The promises of more and better consumer goods came from the Kremlin in response to what appeared to be strong pressure from the ordinary Russian. The comrades appear to be getting tired of waiting for the workers' paradise that never comes. The generation that was thankful for anything that was better than life under the Tsars is gone. The new generation is aware of the sort of living standard that can be maintained by a resourceful and vigorous economy.

In particular, the Poles and Hungarians. Czechs and Ukrainians, who see better living across the border, and watch their resources going to feed the Russian machine, provide a focus for discontent about the way the Soviet economy is managed.

There isn't much doubt that the Russian economy, like our own, is fully employed, and fighting off inflation. Improvements in living standards can be made only by increasing productivity or by diverting resources from other uses. There are many signs that Russia is trying to increase productivity and to boost participation in the Soviet labor force. But the key political question remains: how much of the country's resources should be devoted to producing military equipment and capital goods, and how much should be used to serve consumers? In short, should Russia produce spuds or Sputnik?

On the answer to this question depends the survival of the modern state. Germany's defeat in World War II was at least speeded by the production of too many guns and not enough butter. Russia's progress in the more spectacular branches of science and her lack of progress in meeting consumer demands may be an indication that Soviet leaders are making the same mistake the Nazis made.

In assessing Russia's strength, western observers should take into account not only Sputnik, but spuds. On balance, the capitalist economies are still well ahead.

This Needs Research

Something was started in Washington the other day that could be of very great importance to Canada. It's a plan to set up a permanent research board whose job will be to find more and better industrial uses for farm products.

Eventually, it is hoped, U.S. industry will be able to absorb all surplus corn, wheat, lard and other farm products that normal domestic consumption does not need. In other words, the goal is a much cheaper, more permanent and far less disturbing way of dealing with farm surpluses than giving them away as at present.

It is not a new idea, of course, and realists are not looking for any quick miracles. But a special president's committee which has been investigating the matter is confident that ultimately it will solve the problem and that it is the only practical approach to a basic long-term problem.

U.S. farm output is running well ahead of demand and, with increasing efficiency of production, will probably continue to do so for years. At the same time, many former important outlets have shrunk. "Nearly half the market for natural fibres, cotton, wool, flax, silk, has been taken over by synthetic fibres. Two out of three pairs of shoes are now made partly or wholly out of leather substitutes. Two thirds of the soap has been replaced by detergents which do not use natural fats. Much of the paint and varnish bypasses linseed and other vegetable oils."

Research aimed at finding new industrial uses for agricultural products is imperative. At present, very little along this line is being done —a mere $18 million a year is spent on utilization research by agriculture compared with over $3 billion by U.S. industry as a whole.

If, instead of dumping their surpluses on export markets, U.S. farmers turned them into things that industry could use, Canada would certainly benefit.

Communism and Climate

For the man who has swallowed Marx and Lenin whole there is practically no limit to the blessings of Bolshevism. But it's surely a new twist when an enraptured ideologian finds that socialism improves the weather.

The Soviet News Bulletin (Ottawa) recently had this item from a geographer named N. Y. Buchinsky:

> "A rapacious attitude toward natural resources (felling of forests, irrational ploughing of land, etc.,) characteristic of capitalistic countries, usually worsens the climatic conditions. On the other hand, conscious remaking of nature, both in the socialist countries and in a number of countries which have discarded the yoke of colonialism, exerts a favorable influence on the climate."

True enough, climate can be affected by man's treatment of mother earth. The question is whether in fact, as Mr. Buchinsky alleges, mother is regularly beaten up by the predators of the free economy but treated kindly by the disciples of Lenin.

In France, where farmers own their own farms, there is always food in abundance. There are acres that have been cultivated continuously and fruitfully by the same family since Charlemagne's time, i.e. for 1,150 years. If the USSR can match that, how come there's never enough for the Russians to eat?

Do the Hungarians and the Poles find that their lands and forests are better used since Utopia arrives in the shape of Communist agents and puppet rulers? Judging by their cries for bread and habitable dwellings, the "conscious remaking" of their particular plots under socialism seems to have been marred somewhat by the rapacity Mr. Buchinsky dislikes.

And speaking of colonies, did the Ghanians know more or less about growing cocoa, the Malayans more or less about growing rubber, after wicked Western colonialists had taught them the trick?

Nice capitalistic weather we're having this fall, isn't it?

Napier Moore's Scratch Pad

A SHORT TIME AGO, the CPR's newest liner, Empress of England, broke the speed record for the passage from Father Point to Liverpool. Last week, the North Atlantic, in surly mood, got a bit of its own back by making her a day late in arriving at Montreal.

We had a boisterous two days in midocean, with a full gale whipping up 60-foot waves, making it necessary at times for the ship to reduce speed to bare steerage way. It was the roughest patch she had encountered since going into service, and her officers were highly pleased with her performance.

Now in heavy weather any ship will roll whether it is equipped with the new stabilizing fins or not. From the passenger-comfort point of view, the question is how much more she would roll if she hadn't got stabilizers. We found that out. Early one morning I was almost hurled out of my bed. On the bridge a decision had been made to draw in the fins to see if by any chance easier riding would result. In three minutes the fins were out again, thus settling the question. Roll with fins out, 12 degrees. Roll with fins in, 23 degrees.

* * *

ON BOARD THERE WAS ONE PASSENGER who displayed more than ordinary interest in the ship's performance. He was Major-General C. A. L. Dunphie, C.B., C.B.E., D.S.O., managing director of Vickers-Armstrongs, who built the Empress of England and who have the contract to build another and slightly larger ship for CPR. He hadn't been on the ship since her trial runs, and was well satisfied with her behavior in heavy weather.

I had a chat with General Dunphie. He is in Canada to visit Canadian Vickers in Montreal, after which he will pay his first visit to Vancouver and Calgary. So far as shipbuilding is concerned, his main aim and hope is to induce shipping companies in various countries to have new vessels constructed in the Canadian yards. For in England Vickers-Armstrongs are booked until 1962.

"Canadian yards can build excellent ships," he said. "Wages and other costs are higher than they are in England, but we could supply the machinery from England, and the over-all price difference wouldn't be as great as many people think. Moreover, going a long way to offset the price margin is the matter of prompt delivery — a most important factor."

* * *

FLOYD S. CHALMERS, president of Maclean-Hunter Publishing Co. has just been elected a Freeman of The Worshipful Company of Stationers and Newspaper Makers. He is the first Canadian to receive that honor since 1928.

In the Freeman's Declaration he made, he swears not only that he will be "Good and True to our Sovereign Lady Queen Elizabeth, and be obedient to the Master and Wardens of this Company in all lawful manner," but "That I will not be party or privy in any Counsel or Device that may be to the Hurt or Hindrance of the said Company, or to the overthrowing and breaking of the good Laws and Ordinances of the same; but all such Practices, Counsels and Devices I will disclose to the said Masters and Wardens of the Company, and them labour to hinder and break as much as in me lies."

The Worshipful Company is very old. It was founded in 1463 and incorporated in 1557. Not until 1933 was the more modern Company of Newspaper Makers permitted to amalgamate with it.

* * *

IN THE BEGINNING, the Stationers' Company was a tough monopoly. By 1695 it had succeeded in wangling a law limiting the number of master printers to 20. It bound apprentices (giving them each a Bible and a Prayer Book). It dominated the book trade; taxed writers. As late as 1871 it was bitterly attacked as "the custom house of British literature, levying imposts on knowledge, authors, and disgracing English literature by selling almanacs and prognostications." It had a monopoly on almanacs, prosecuting any non-member brash enough to publish an almanac on his own.

Now the Company has 400 members. Since 1676, twenty-seven of its members have served as Lord Mayor of London. Its honor roll bears such names as Rudyard Kipling, Sir James Barrie and Prime Minister Macmillan.

Stationers' Hall in which the Company functions, was erected soon after the Great Fire of London. In the old days it could be rented by outsiders for festive occasions. In 1745, for instance, it was let to the Barber Surgeons on condition that there be no dissections.

Admission to the Company is by patrimony (if one is the son of a Freeman), by service, or "apprenticeship," or by "redemption" on payment of £15. In due time, a Freeman becomes a Liveryman (cost £50). Twelve years after admission to the Livery, a member is eligible for nomination to the office of Renter Warden. Of those nominated each year, two are elected by the "Court" to serve the office. Now comes an odd thing.

A "fine" of £21 is paid by the two who are elected, and those who aren't elected pay a fine of £25 3s 0d. And if any Liveryman decline to pay the fine, his name is placed on a list known as "Rotten Row." In which case he doesn't even get an invitation to the Company's dinners.

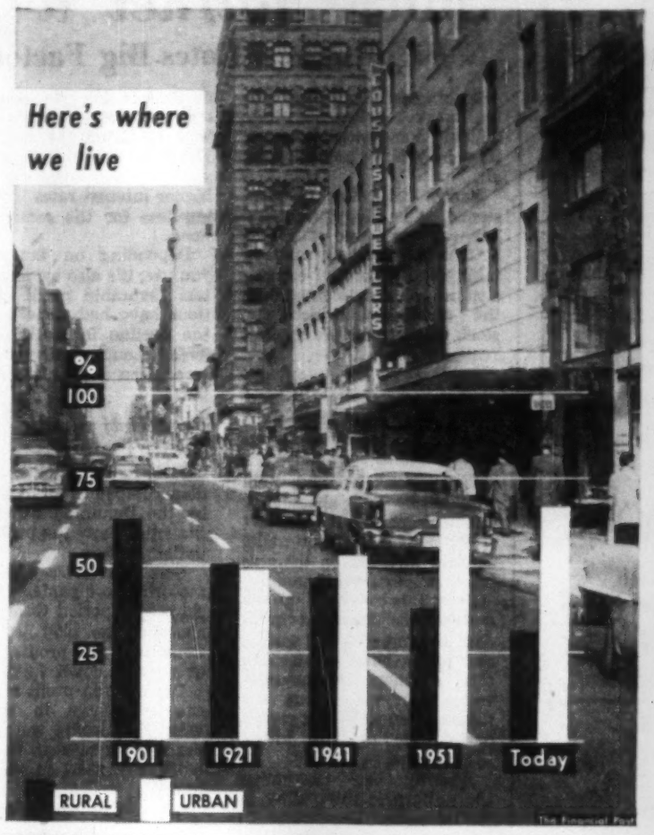
A Liveryman in good standing can be elected to the Court of Assistants, but that takes about 30 years.

Stop Me, If—

"Have I told you about my summer vacation?"

"No. And I appreciate it."

Townward trend



Post Scripts

He Knows Canada

Martin John Marshall, tall (over 6 ft.) and young (43), who was recently appointed United Kingdom Trade Commissioner in Montreal, is no stranger to Canada.

He came to this country in August, 1950, as the No. 3 Trade Commissioner in the Montreal office. He was subsequently transferred to Toronto and in 1953 to the Atlantic Provinces region before going to Edmonton as Trade Commissioner for Alberta and the Northwest Territories.

MR. MARSHALL

During this period he has visited every major city in Canada in the course of his duties to stimulate British exports to this growing market.

Born in London, Eng., he was educated at Westminster City School and then entered the University of London, London School of Economics, where he obtained a degree in law in 1935. Some years later he read for law and was called to the Bar at Grey's Inn in 1947. He undertook this course in his spare time and was so successful that he was named Lee Essayist, an annual award for the best-written paper on a certain subject.

After completing his course at the London School of Economics, he entered the U. K. civil service in customs and excise. This brought him in contact with many manufacturing firms and gave him insight into their operations as well as stimulated his interest in travel. His work carried him to cities and towns throughout Britain.

In 1940 he joined the Ministry of Aircraft Production in the Directorate of Technical Development. In this post he was in contact with engineers and scientists and wrote technical articles for publication. In 1946 he moved to the Ministry of Supply which was particularly concerned with engineering export policy. He was a regular member of a negotiation team which handled many postwar meetings with other countries on trade and finance. The work took him to a number of countries including Poland, France and Czechoslovakia.

He believes there are good opportunities for British exports to increase in Canada not only along traditional lines like textiles and liquors but also in new areas, like aircraft.

In his spare time, which is limited, he particularly enjoys reading.

Married, he and his wife, the former Olive King, also of England, have two children, Gabrielle, 18, and Claire, 12.

* * *

CGE Top Executive

Early last week a Canadian stepped up into the president's office of the country's largest electrical manufacturing company

J. H. "Herb" Smith, a soft-spoken professional engineer, born 47 years ago in Fredericton, N.B., has spent his entire working career with the company he now heads—Canadian General Electric. As CGE's chief executive, he heads a team which now has Canadians occupying all top managerial positions.

Smith's election as president follows a quarter century of experience in which he has been involved in virtually every facet of operation of this 15,500-employee company.

Strong on engineering background, Smith joined the company's engineering "test" course after graduation from the University of New Brunswick—from which he holds the degree of Master of Science in electrical engineering. After engineering assignments at the company's largest plant in Peterborough he was moved in 1936 to Hamilton as sales engineer.

Moved to Toronto in 1945, he was successively manager of supply sales and apparatus sales in that location.

In 1952, as part of the decentralization program instituted by the company, a wholesale department was set up and Smith was appointed its general manager.

Elected a vice-president of the company in 1953, Smith was transferred in 1955 to Montreal as general manager of the appliance department. Later in the same year he returned to Peterborough as head of the apparatus department — the heavy capital goods segment of the company's business. It was from this post that he moved last week to the company's Toronto head office as president and chief executive officer.

Smith's affiliations outside the office reflect his engineering background. He is a former president of the Association of Professional Engineers of Ontario, and earlier this year was appointed to the governing council of the association. He is also a member of the Senate of the University of Toronto, representing the engineering profession.

Mr. and Mrs. Smith are moving in the near future into a home they recently purchased in Toronto's Forest Hill district. There, Smith may devote some time to his interests in gardening and reading (special interest: political economy). He is also one of the growing body of "hi-fi" fans who assemble their own equipment. On the more active side, he confesses a liking for golf with, as he says, "enthusiasm making up for lack of skill."

* * *

London to Lethbridge

All the way from Alberta House in London comes the new industrial commissioner for the City of Lethbridge, John J. Banfield. He succeeds S. R. Lamb, who has been acting commissioner for some years and who recommended the former Toronto man for the job as did the provincial government.

Thirty-seven-year-old Banfield takes over as Lethbridge and Southern Alberta are entering an era of industrial expansion linked not only with the farm and ranch, but also with oil and gas. The petrochemical industry is taking the spotlight with the second unit of the multimillion-dollar British American Oil Company's natural gas processing plant at Pincher Creek now getting under way. The initial sulphur recovery unit has been operating for months, the sulphur going largely to the North-West Nitro Chemical plant at Medicine Hat.

MR. BANFIELD

John Banfield spent 10 years at Alberta House in various posts, the last as executive assistant to the agent-general. This gave him a thorough grasp of British industry and trade with its Canadian links. Lethbridge hopes this will pay off when he gets into his new duties.

During his years in Britain he was specially connected with promoting trade interests attractive to Alberta in the United Kingdom and on the continent. He worked closely with the industrial departments of the banks in London and also with the Canadian railways' offices overseas, trade commissioners, the Federation of British Industries, Scottish Industries Council and similar agencies. The preparation of industrial reports was one of his special jobs.

Banfield was born in Toronto, is married and has two sons, who will now get a taste of Canadian school methods. He served five years in the Armed Services during the Second World War in the United Kingdom, Central Mediterranean and northwestern Europe.

In addition to his experience in Britain and continental Europe, the new Lethbridge commissioner has kept in close touch with the postwar industrial boom in Alberta.

What Others Are Saying

Editorial of the Week

The B.W.I. and Canada

Halifax Chronicle-Herald

The West Indies will only achieve real value as a market if they are developed to the stage where their three million inhabitants can afford to buy our goods. This means not just giving them preferences for the exporting of their products to this country and the provision of adequate shipping facilities to carry them, but also financial and technical assistance for the proper development of their resources and for the taking advantage of climatic conditions for more extensive food production.

For many years Britain has been pumping funds into the area for the betterment of its economy and it will continue to do so in the transition period from colonial to self-governing status. But the United Kingdom cannot be expected to continue to carry this burden alone, particularly during its period of economic pinch at home.

There will be some in Canada who will oppose Canadian help, but it is our view that a great majority in this country will endorse any measures Ottawa devises to assist this new and struggling young sister. Certainly it appears that such a program has become a matter of bi-partisan policy adopted after thorough consideration. We hope that, now that Canada has committed itself to a readiness to assist, it will show by our deeds that it is sincere.

Other People's Views

"OF ALL THE PRODUCTS of the soil that are now being harvested, none has more claim to admiration than the pumpkin," says the **Ottawa Citizen.** "This splendid vegetable has that rare virtue of being good to look at as well as to eat. In this respect it is superior to the potato, the cabbage and even the Hubbard squash. In its massive golden rotundity, the pumpkin stands alone, without a rival."

"MUCH HAS BEEN WRITTEN these past few months of inter-departmental jealousies in Washington about projects — and priorities," says the **Montreal Star.** "Perhaps because of these the United States has lagged on the satellite program as it apparently has on the development of the intercontinental ballistic missile. If these Russian successes put an end to these departmental jealousies, it may be that a good purpose has been accidentally achieved."

"THE MARITIMES have been scarcely touched," says the **Cape Breton Post,** "by the flow of immigration. Most of the newcomers have headed for Ontario and Quebec. In Toronto, as one example, the citizens are much aware of the tide of immigration that has entered their midst. Foreign faces and foreign speech are most apparent there wherever the public moves, on bus, subway or train, and in the throngs at bus terminals and railway stations. The Diefenbaker Government has been discreet, if not wise, in curtailing immigration for the time being."

"A NEW MONSTER has turned up in Lake Pohenegamook, Quebec, and things have taken a nasty turn," says the **Winnipeg Tribune.** "The provincial minister of fisheries, Hon. Camille Pouliot, has authorized extension of the fishing season to permit adventurous fishermen to try their hand at catching the 'thing.' This is a monstrous idea, quite out of keeping with monsterism's traditions. The only consolation is that the enterprise seems foredoomed to failure. Authentic monsters are never caught. They stay well out of range of guns, cameras, fishing tackle and the official eye. It is doubtful that anyone would recognize a monster if he caught one."

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October 19, 1957

Taking the National Heartbeat

Hutchison Writes Ardently About Canada, Not Including Toronto

By J. B. McGEACHY

Trying to pin down the special qualities of particular tribes or nations, Scots, English, Americans, Peruvians, Germans, Hottentots, has been a popular game for a long time. It's a source of innocent merriment and, very occasionally, knowledge.

Canadians have recently got into this act, either as self-analysts or as butterflies impaled for other people's examination; and one of the most persevering students of our national character is my distinguished friend and colleague Bruce Hutchison. His unabated curiosity on the subject is demonstrated by the publication of his latest book, "Canada, Tomorrow's Giant."

It is, as you might expect, an excellently readable work. It has the poetry, high spirits, good humor and indefatigable reportorial zeal Mr. Hutchison's readers expect from him as they expect honey from a bee. He has described a journey from Newfoundland to Vancouver Island; and regarded only as a travel book "Canada, Tomorrow's Giant" is a success.

As always, however, Mr. Hutchison has a deeper purpose; and this is to discover "what kind of men inhabit this half-continent behind the caricature of the tourist advertisement and the legend of a simple, competent, successful and rather dull folk?" Mr. Hutchison is also interested in the survival power of "a nation conceived in anger against its neighbor, born in defiance of American power, of geography and economics"; which is certainly a shiny epigrammatic synopsis of Canadian history up to the late 1800s.

The interesting question about Mr. Hutchison's book is whether or not he arrives at any firm general belief about the nature of the Canadian species—homo Canadensis if you like—and about the ability of this particular breed to continue flourishing. I don't think he does.

I don't think any author can hope to be definite about national character. As to the second point, I doubt very much if it's possible to reach useful conclusions about survival by conducting a kind of Gallup poll among picturesque and hardy members of the clan, nation or group.

I suppose that every Pole interviewed since 1772, year of the first partition, would have expressed a lusty patriotic faith; but this doesn't seem to have affected Polish history very decisively. Conversely, it's questionable if 25% of the inhabitants of the 13 colonies would have said, in 1776, that the U. S. A. would outlive adolescence. It very nearly didn't.

I also know that he's quite right in believing that the most interesting thing about any nation is not how many tons of wheat or gold it produces, but what songs it sings, what thoughts its poets and playwrights express, what sort of pictures its painters produce.

The trouble is that so powerful is Mr. Hutchison's bias against the citadels of wealth —Toronto in particular—that he will look for the true original Canadian spirit, genius or achievement anywhere at all but in the metropolitan centres without which there could be no Canada. If a Canadian smells of tar and cod, he is interesting to some people. If he sweats in a wheatfield, he is interesting. If he is merely an inhabitant of Toronto, he is worth looking at, only for a distasteful moment or two, as an anonymous ant in a heap.

Leaving aside for a moment this distressing Toronto business, let us return to the matter of the Canadian national character. If there is no such thing, as some believe, this would not be a disgrace to the country.

In actual fact there are innumerable Canadian types, quite distinct, as Mr. Hutchison shows in a series of local vignettes. Each is fascinating though, taken as a group, they have no observable common denominator except the ordinary human attributes of desire for food, shelter and companionship. A similar gallery of diverse pictures could be readily assembled in Britain, or in France, or even in Germany which is supposedly conformist to the last degree.

J. B. McGEACHY

"National spirit grows on shared memories of great work done. There is plenty of food for Canadian patriotism in the history of the country to date."

The National Spirit

Mr. Hutchison does find, after his coast-to-coast survey, a strengthening of the Canadian national spirit. Most people would agree; but they wouldn't necessarily mean what he means. He gives undue importance, it seems to me, to vague and almost mystical notions like attachment to a common land, whose strangeness he exaggerates, and not enough importance to down-to-earth facts expressible in statistics — like, for example, the growth of the mining industry or the growth of Toronto.

I know that by express design Mr. Hutchison avoided writing a statistical book, a book of solid factual material about industrial progress, agricultural change and so on.

Newfoundland Vignette

Mr. Hutchison begins with a charming sketch of a group of Newfoundland fishermen. The smell is of cod, tar, salt, sweat and sea. The men are weatherbeaten, poor, illiterate. Why do they stick to their toilsome, unprofitable trade when there are jobs on the mainland? Well, fishing is a good life when there are cod and the price is fair. Besides, they know no other trade; and they have been where they are for a long time. The codfish business in that part of the world is nearly as old as Columbus' discovery.

It is all very quaint; but Mr. Hutchison is here permitting himself to be a romantic individualist. The statistical truth is that the shore fishermen are deserting their ancient trade by thousands now that Smallwood prosperity offers more comfortable occupations like driving taxicabs or running elevators.

But Mr. Hutchison is without doubt completely accurate when he reports that these Newfoundland folk are unsure of the benefits of union with Canada. Some even think that the new social security, with its offer of an easy life by island standards, will be the ruin of Newfoundland. "Canada" is still hazily remote for all but the few who are personally concerned in politics. It will be a long time before the islanders think of themselves as Canadians.

From their rocky shores we move to Prince Edward Island where, says Mr. Hutchison, folk are insular and do not think in national terms; thence to New Brunswick where poverty and memories of the great past have knit the people "into a clan, almost a secret society and arcanum within the nation." Mr. Hutchison is equally vivid as he crosses French Canada into Ontario and then traverses the prairie to reach the magnificence of British Columbia. It is his adopted homeland and he regards it with honest pride and affection, deeply stirring if a little daunting to lesser beings who happen to live, let us say, in Ontario.

Mr. Hutchison found, as he was certain to find, that there's no such animal as the typical Canadian, no 100% representative of our breed who could be either categorized for an encyclopaedia or stuffed for a museum. It goes without saying that Mr. Hutchison knew this in advance. He wasn't looking for a mythical beast.

What he did find, knowing it already, was that the human race in these parts is wonderfully varied. To take a quick random sampling of people I've actually known, could there be any more oddly assorted company of people than a P.E.I. French-Creole bootlegger, a Halifax lawyer of Scottish extraction, a French-Canadian journalist directly descended from one of James Wolfe's highlanders, a St. Lawrence river pilot, a Toronto TV producer who graduated from the Swedish National Theatre in Stockholm, an Ontario lady who is a direct descendant of Henry VIII, a Communist alderman in Winnipeg, a Saskatchewan farmer who reads Plato in Greek, a hot-gospelling Social Credit politician from Alberta and Mr. Bruce Hutchison from British Columbia? What a fascinating collection!

"You men are all the same," said the fat lady in the circus when the giant proposed to her in the presence of the india-rubber man, the two-headed man and the man with four legs.

Highly Variegated

Nobody can ever make this complaint about Canadians. They are wildly, hilariously, fabulously different. They are even more different than Aberdonians and Cornishmen, Basques and Castilians, Bretons and Marseillais. Furthermore, they are not dull but extremely interesting.

Knowing all this, Mr. Hutchison asks: Are they really and truly all Canadians, and if so why? The answer is that certainly they're all Canadians. Don't they all have to pay income tax to the same treasury on the same date?

But our philosopher-mystic-historian wants them to be all Canadians in the sense that they all feel the same way about the country, all love it passionately, all experience a wonderful sense of exhilaration at the mere thought that here they are.

This, I think, is asking too much.

It appears to me that, on this general point, there is an excess of weeping into beer suds. There is too much crying "woe, woe, alas my poor misunderstood country that has so sad a destiny." I detect this melancholy note in Mr. Hutchison's emphasis on the strangeness of Canada and also in the historical writings of Prof. Arthur Lower.

Personally, I don't want Canada to be a mystic union à la Hutchison.

There is surely no need for all Newfoundlanders to be carrying on a perpetual, long-distance, in-absentia love affair with British Columbia and vice versa. It is surely possible that some Canadians should dislike some other Canadians intensely, or that some Canadians should desire to live in Egypt or Panama or Hawaii, without the country falling apart.

True enough, it's the function and duty of the poet (and let us include Mr. Hutchison in this category) to sing songs that will make the people feel happy and glorious and united; but this is not quite the same thing as telling them what odd, incomprehensible, remote, dispersed and peculiar inhabitants of ultima thule they are.

This is a caricature, perhaps a gross caricature, of what Mr. Hutchison says. Its friendly intent is simply to emphasize an obvious fact about national spirit.

Shared Memories

This spirit, here as in any other country, grows on shared memories of great work done. There is plenty of genuine food for Canadian patriotism, to use an unfashionable but still excellent and precisely correct word, in the known history of the country to date. Confederation was without doubt one of the tremendous achievements of the past century; the makers of it were "heroes" by any standard.

It seems reasonable to ask that the makers of legend and myth in this country, should use the abundant material at hand—instead of worrying about whether Canadian national feeling will blossom.

Mere indoctrination, mere preaching about an abstract idea, is of no use. The true story, documented and told with enthusiasm can include poetry, books, music, victories in battle, scientific wonders, political successes. It might even include the rise of great cities; and at this point I come back to my main quarrel with Mr. Hutchison.

For Montreal he has a few kind words. It is Canada's only real city, he says; but here he seems to be merely offering a conventional judgment without investigation of the wicked charms that still, he reports, slightly frighten him.

As for Toronto, our author arrives here on p. 151 and is gone by p. 153 (as quickly as decency will permit) in a book which has 27 pages for the Newfoundland community already mentioned.

In the course of the few words devoted to Ontario's pride and joy (or is it?) Mr. Hutchison has room to call Toronto "this sprawling, ill-jointed civic colossus," to speak of its "distended and dropsical body" and to mention "the shiny smugness, the well-fed aldermanic look, and the self-infatuation that so repel strangers."

Is Toronto really like this at all? Speaking as a resident since 1946, who also lived here as a student in the 1920s, I am inclined to scold Mr. Hutchison for bad observation and hasty comment. "Hasty" is the word since according to his own account he quit our town, in search of more of his tar-scented genuine Canadians, with all possible speed.

The curious thing is that an ordinary citizen of Toronto, if you ask him, is just as likely to have interesting opinions about life in general (not any more likely but just as likely) as one of the non-urban toilers who fetched Mr. Hutchison as the solitary reaper fetched William Wordsworth.

Toronto people are members of the human race. What's more, they know about culture—to a certain extent. They also know about this Canadian history that's on Mr. Hutchison's mind. A lot of it happened here.

There's no hope at all for a Canadian spirit that's really happy and glorious, long to reign over us, if important and influential writers, people who shake men's minds as Hutchison does, are too provincial to take pride in the rise of a city that is doing a pretty good job of being rich gracefully.

Repent, Hutchison, while there is yet time. Don't shoot the pianist. He is doing his best.

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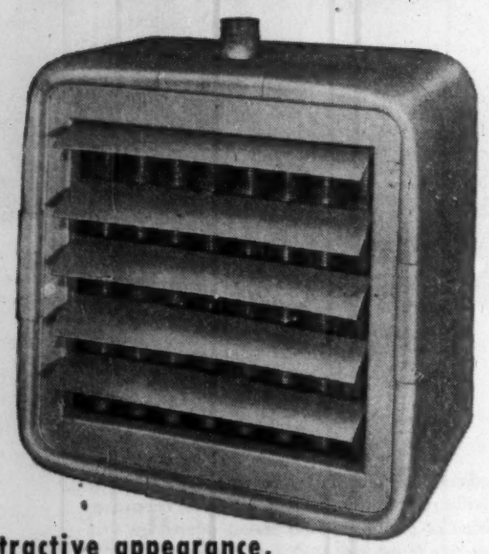

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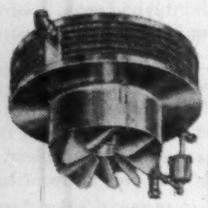

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YOUR FUTURE IS OUR BUSINESS TODAY!

SUBLIMINAL SNEAK

Cover Up Your Subconscious!

By C. KNOWLTON NASH

WASHINGTON, D.C. — The "Sputnik Era" has given the U.S. advertising profession a great big needle.

I have barely survived the advertising onslaught of flip-top boxes and 20,000 filters. I now go along with the idea of selling the sizzle, not the steak.

But the Sputnik coincides with something called "'subliminal projection." That's a $50 phrase meaning "secret sell."

A U.S. market researcher, called James M. Vicary, reports he's already successfully tested this weapon against mankind's unconscious.

In a New Jersey movie theatre, Mr. Vicary had flashed on the screen at speeds up to 1/3,000th sec. the words: "Eat Popcorn—Drink Coca Cola."

These hidden commercials were flashed on the screen simultaneously with the feature picture, but so fast, the audience was not aware of seeing them. The big — the terrifying — fact is: The subconscious minds of the audiences saw these "secret sells."

They "got" the message.

The theatre experimented for six weeks and at the end, found popcorn sales had jumped 47.5% and Coca Cola sales were up 18.1%.

Shortly, a U.S. nation-wide test will be tried on television.

Frankly, I just want Madison Ave. to get the heck out of my subconscious.

I don't want the advertising people messing around with my ego, my id and especially my libido. That's private property.

Fantastic Possibilities

The possibilities for "subliminal projection" are fantastic. I've always hated popcorn, but, the subliminal thing may force me to like it.

Think what it might do for comedians.

A mediocre joke on television can be followed with a subliminal message and 40 million people will laugh.

On a soap opera, the message will be, Cry.

In politics "subliminal projection" is a terrifying prospect.

"Vote for Zilch, vote for Zilch," repeated a couple dozen times a day at 1/3,000th sec. is quite likely to elect Zilch, regardless of what a bum he is.

One point of interest in this newfangled advertising gimmick is that you go back to the old style of advertising.

No more explanation as to why you should drink Coca Cola.

No more motivation research.

No more sizzle.

Just the sell and no nonsense.

Just drink it and shaddup!

A congressman has heard about this "subliminal projection" and when any congressman hears of something new, he demands an investigation.

So, Representative William A. Dawson, a Republican from Utah, wants the Federal Communications Commision to look into this thing.

"Put to political propaganda purposes (it) would be made to order for the establishment and maintenance of a totalitarian government," he says.

Not So Bad

But things may not be as bad as we fear or even as bad as Aldous Huxley feared in his "Brave New World" where children were conditioned in sleep to stay in their own social classes.

The U.S. government's National Institute of Mental Health says it has known about this fiendish idea for several years.

An official says psychologists have been experimenting widely, but Mr. Vicary's efforts are the first commercial application.

Clearly, it's time for the UN to forget about Sputnik, nuclear disarmament and the problems of West Iran.

"Subliminal projection" undoubtedly is the most fiendish plot foisted up an innocent and unsuspecting mankind since Genghis Khan loosed his hordes.

Sputnik's Challenge

Market analysts were feverishly trying to assess this week the market implications of Sputnik, the Russians' little satellite.

If the U.S. steps up its satellite and missile program, what is this going to do to the present aircraft program? What will it do to the defense program?

As one investment man pointed out, U.S. aircraft firms are already running into working capital difficulties because of a stretch-out in aircraft delivery schedules.

If a speeded-up missile program is imposed on U.S. industry as well, won't this stretch their financial resources even more?

If the government goes to their aid through special loans, or if it makes money easier to raise, this would affect U.S. monetary policy.

Production differences would also have an effect on corporate results.

Missiles are smaller, would require fewer parts and presumably fewer firms to make them.

They would require more engineering talent, but possibly less total employment.

However, because missiles are one-shot weapons, and aircraft, it is hoped, will return, more missiles would be needed than aircraft.

Even with the reductions in output, and stretch-outs which have been announced, defense spending is expected in the current fiscal year to exceed the 1956-57 level by $2 billion. Sputnik may send it even higher.

Aside from defense, there is not much prospect of cutting back the many items outside the federal budget—old age security payments, the highways program, farm price support program, and climbing public and debt charges.

Tory Move Picks Gas Out of Current Politics

(CONTINUED FROM P. 1)

interests; national policy on regulation of rates, prices and financial structure of pipeline companies for oil and gas.

The extent and kind of authority that ought to be given to a national energy board, and the way it should operate!

• Any special measures necessary to deal with Trans-Canada Pipe Lines, so as to safeguard the interests of Canadian producers and consumers.

Members appointed to the commission are J. Louis Levesque, Montreal financier, George Britnell, Saskatchewan University economist, Gordon Cushing, vice-president of CLC, Robert Howland, Halifax economist, Leon Ladner, Q.C., Vancouver lawyer.

There is no member from Alberta, and this is thought to be deliberate.

It was probably feared that anyone knowledgeable on oil and gas from that province might be regarded as having special interests in the commission's work.

Never Mind That Bonus, Will We Still Work Here?

(CONTINUED FROM P. 1)

here the pressure of selling has not been great.

Although heavily tested in recent weeks there's plenty of customer opitimism about, most brokers claim; at least enough to hold onto stocks at these depressed levels for a while further to get clearer indications of business direction ahead.

What can brokerage houses do to reduce overhead?

What order do such moves take?

First move is generally not to replace temporary staff or staff that has voluntarily quit. All firms contacted are following this policy.

Next likely move is to start cutting the more expendable help; in some cases floor traders, wire-men, employees from accounting departments, from dividends department, etc.

Along about here advertising budgets are pared.

Then some houses will start cutting wire services to out-of-town branches and connections.

Several well-known Toronto wire houses have already started on this program.

Along about this time too, such customers' services as publications (Canadian and U.S. papers and magazines) and monthly letters are cut back.

If business continues at current levels for several months then such moves as removal of ticker service would be considered.

By that time too there would likely have been news of various merger moves, possibly a few failures.

Wenner-Gren Power Plans

(CONTINUED FROM P. 1)

veying power and industrial potentials.

It was to proceed with development if survey results panned out.

Here's progress report so far:

• **The giant U.K.-based British Thomson Houston Co.,** through its subsidiary, **British Thomson Houston Co. (Canada)** has made a preliminary aerial survey of the power possibilities.

• **It has been instructed** to go ahead with a more detailed survey.

Representatives of the company will be meeting in Vancouver within a few weeks to lay plans and drilling crews will be going into the area as soon as possible to check on dam sites and establish water levels.

• **Minerals and other preliminary surveys** have also been going ahead in the area during the summer but results have not yet been announced.

FOREIGN EXCHANGE RATES

Noon Value in Canada
Week Ended October 11, 1957

	U.S. $	U.K. £
Mon.	97 2/32	2.71 13/16
Tues.	97 2/32	2.71 14/16
Wed.	96 29/32	2.71 9/16
Thurs.	96 22/32	2.70 11/16
Fri.	96 29/32	2.70 4/16
Ave.	96 148/160	2.71 19/80

U.S. rate reported by Bank of Canada.

U.K. bid rate reported by Toronto-Dominion Bank.

Leishman's Mr. Dillmann Looks His Best in Leishman's "Musketeer" Suit

Combining practicality, smart looks and exceptional value—no wonder Mr. Dillmann appears so satisfied in his "Musketeer" suit by Leishman. A really notable asset for the younger man on his way to bigger things—"Musketeer" features desirable economy, Leishman's suave natural styling, imported exclusive fabrics plus the big bonus in every Leishman garment . . . superior workmanship by Canada's most talented tailoring hands. A "Musketeer" suit will do wonders for you, sir.

Tailored-To-Measure or Ready-To-Wear

Leishman Clothes are sold at important stores from coast to coast.

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LEISHMAN

CANADA'S MOST DISTINGUISHED CLOTHES

Management Slate Wins Sweet Grass, Cromwell Heads

The management slate won out in a proxy fight for control of **Great Sweet Grass Oils** (FP, Sept. 28). At an adjourned annual meeting, the seven-man management group was declared elected over an opposing group supported by former directors of the company.

New president is J. H. R. Cromwell, former U. S. ambassador to Canada. Colin A. Campbell, former president who had succeeded Samuel Ciglen, earlier had announced his support for the Cromwell group.

Other directors are Grover Whalen, G. Russell Jr., I. D. Robbins and R. B. Berger of the U. S. and F. I. Malone and T. I. Anderson, Toronto

Mr. Cromwell said he was negotiating with a Texas oil management firm to take over administration of Great Sweet Grass.

Representatives of the opposition group said rulings of validity of proxies would be studied.

ACCOUNTANTS MOVE

Dainow, Alper & Co., chartered accountants, has moved its offices to 3,448 Peel St., Montreal.

ANNOUNCEMENT

ARO EQUIPMENT APPOINTMENT

K. H. ZINSMASTER

Marquard J. Anderson, President, the Aro Equipment Corporation, is pleased to announce the appointment of Mr. K. H. Zinsmaster as General Manager of Aro Equipment of Canada Ltd. In making this appointment, Mr. Anderson pointed out that when the new offices and plant opened three years ago, it was the company's intention to gradually assemble and manufacture in Canada all Aro products for Canadian consumption.

Mr. Zinsmaster brings to his new position 22 years' experience with the parent company in Bryan, Ohio, including active service in World War II. This appointment will result in relinquishing his position as Manager of Procurement and Production Planning.

This appointment will greatly facilitate the administrative and production end of the Canadian operations in keeping with Aro's progressive sales and service policies.

THE CORPORATION OF THE CITY OF LONDON

— TENDER FOR DEBENTURES —

Sealed tenders addressed to The Treasurer, Corporation of the City of London, marked: "Tender For Debentures" will be received up to 12 o'clock noon Monday, October 28, 1957 for the purchase of —

$2,387,000.00 — 5¼% Serial Instalment Debentures dated October 1, 1957, maturing October 1, 1958, to October 1, 1975, to defray the cost of constructing a Central Fire Hall, Machine Shop for the Fire Department and an addition to No. 4 Fire Hall, extension of the West End Sewage Treatment Plant, construction of an Artificial Ice Rink, alterations to the Police Building, alterations to Victoria Hospital and the construction of a Collegiate Vocational Institute.

The debentures will have the Validation Certificate of The Ontario Municipal Board.

A certified cheque for $25,000.00 payable to The Treasurer, Corporation of the City of London, Ontario must accompany each tender.

Interest will not be allowed on tender cheques.

The right is reserved to reject any or all tenders.

Further particulars may be obtained from the City Treasurer, London, Ontario.

Tories Unlikely to Start Farm Parity Price System

OTTAWA (Staff)—The new government's Throne Speech promise to "provide greater stability in farm prices" is still a shot in the dark.

The methods are not only unannounced, they are still undecided.

Latest thoughts are believed to be turning against the sort of parity price system which at first won favor with Conservative ministers.

The "parity price" system is the one used in the U. S., and advocated in recent years by the Canadian Federation of Agriculture.

It involves government price support to keep farm prices in a certain stated relationship to other prices, the relationship being determined with reference to some past period.

The government got its latest and most impressive warning against parity prices from no less an authority than Ezra Taft Benson, the U. S. Secretary of Agriculture.

In a private exchange at the recent Canada-U. S. Joint Economic Committee, Mr. Benson solemnly warned the Canadian ministers to have nothing to do with them.

"That," he said in effect, "is what landed us in our present position of overflowing surpluses.

"It will take us at least another two years to work out of it. Why would you want to start now?"

Another result of the Canadian ministers' Washington meeting has now come through. The U. S. government says it would welcome Canadian gifts of wheat to India and Pakistan.

Canada is now trying to persuade both countries to take part of their Colombo plan funds in wheat. The Indian government has made it clear that it would rather get copper and aluminum; but Canada has not yet agreed to supply them.

If the two governments agree to use some of existing funds for wheat, Canada will add some more with funds yet to be voted—but the government still hasn't decided how much.

Among the other items in the speech from the throne are cash advances to Prairie grain farmers, to be made by the wheat board with borrowed money on which the government will pay interest; amendments to the Canadian and British Insurance Companies Act, which will introduce at least mild measures to prevent foreign purchase of Canadian companies; and the expected increases in pensions.

New Nylon Net May Extend Herring Season

MONTREAL (Staff) — **Dominion Textile Co** has displayed two of the largest nylon fishing nets which have been made in Canada.

One, a "herring purse seine net" was ordered by the Quebec Department of Fisheries, and is 90 ft. deep and 960 ft. long, covering an area of 86,400 sq. ft. and weighing 1,800 lb.

The fisheries department purchased the net for the Provincial Biological Laboratory to use in the Gulf of St. Lawrence.

It is believed the herring can be caught in early spring before they approach the Magdalen Islands where they traditionally have been caught in trapped nets.

It is also planned to follow the herring with the seine net and fish them in deep water.

If the experiment is successful, it will extend the herring season by about four weeks to about nine weeks, increasing the catch and fishermen's income.

The other, a tuna seine net is the largest produced in Canada for use in Peru. It wighs 5,200 lb. has an area of 324,000 sq. ft. and stretches 1,800 ft. with a depth of 180 ft.

Walkers Net Rises By 7%

Net profit of **Hiram Walker-Gooderham & Worts Ltd.,** Walkerville, for the year ended Aug. 31, 1957, amounted to approximately $7.80 a share, President Howard R. Walton reports. Previous year's net was $7.30 a share.

Directors have approved a three-for-one split of the shares subject to shareholders' approval Dec. 13. If the split becomes effective, directors intend to establish a quarterly dividend rate of 35c on the new shares.

Company has been paying 75c a share on the present stock and declared a $1 extra payable Oct. 15.

CF-100 Mark VI Project To Go On?

Officials of the Department of Defense Production and **Avro Aircraft Ltd.** were expected to meet late this week, to discuss continuation of the development program for the CF-100 Mark VI, latest version of Avro's jet interceptor.

Last week the government cancelled its production program for the Mark VI, in an economy move. It is understood, however, that the government does not intend to drop development work on the Mark VI.

To soften the impact of cancellation of Mark VI production orders, the department has placed further orders with Avro Aircraft for the CF-100 Mark V.

Avro's newest project, the Arrow — or CF-105 — was unveiled this month. However, the necessary final development and flight testing may retard its production by two years or more, if normal experience in new aircraft development holds good.

Bank Staff Changes

Commerce:

D. V. BROOKE, an assistant accountant, Queen & Spadina, Toronto, to be accountant, Fairbank, Toronto.

E. J. BUCKLEY, assistant accountant, Fredericton, N.B., to be accountant, Amherst, N.S.

K. J. CLARKE, formerly accountant, Hastings & Gilmore, Burnaby, B.C., to be accountant at the newly opened branch at Georgia & Burrard, Vancouver.

A. R. COOMBES, to be assistant accountant, Kingsway & Knight Road, Vancouver.

N. O. DOW, special representative, Toronto, to be manager, Safety Deposit Box Department, Toronto.

R. FEA, to be assistant accountant, London, Eng.

J. L. GEDDES, assistant accountant, Kingsway & Knight Road, Vancouver, to be accountant, Penticton, B.C.

J. W. GRAHAM, formerly manager, Nelson, B.C., to be manager of the newly opened branch at Georgia & Burrard, Vancouver.

J. R. HEFFER, to be accountant, Goderich, Ont.

K. F. McKAY, to be accountant, Vanderhoof, B.C.

A. G. MacNEILL, to be assistant accountant, Fredericton, N.B.

N. V. READ, to be an assistant accountant, St. John's, Nfld.

* * *

Montreal:

KENNEDY PARK SHOPPING CENTRE, new branch opened Oct. 15; manager A. H. G. Greive.

RCAF STATION ST. HUBERT, new office to be operated as sub-agency of Longueuil, Que., branch.

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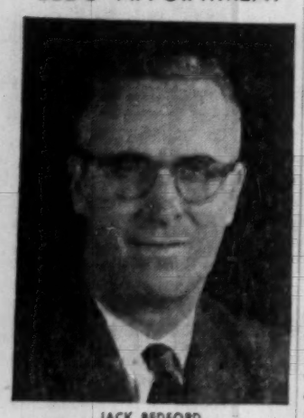
ANNOUNCEMENT

BBDO APPOINTMENT



JACK BEDFORD

The appointment of Jack Bedford as Account Executive in the Toronto Office of Batten, Barton, Durstine & Osborne, Inc. has just been announced by Les Chitty, Manager. Jack Bedford joins BBDO after having served as Sales Manager with the Dr. Chase Medicine Company for nearly five years. Previously, he was employed as an Account Executive for about six years with Spitzer & Mills.

Borden to Head Royal Commission on Energy

OTTAWA (Staff)—The Conservative government has lost no time in tackling the problem of energy policy, which is growing increasingly pressing as the result of new developments in Alberta and British Columbia.

Prime Minister Diefenbaker has announced the appointment of a strong Royal Commission, headed by Henry Borden, president of **Brazilian Traction, Light & Power Co.** to recommend policy on all forms of energy including waterpower, oil and natural gas.

The broad scope of the enquiry is indicated in the first of its terms of reference, which reads: "The policies which will best serve the national interest in relation to the export of energy and sources of energy from Canada."

This is the first time that electricity, waterpower, gas and all other energy sources have been brought under one heading in terms of government policy.

It gives promise that the scattered and understaffed sections dealing with energy questions in the federal government may be rationalized and given coherence.

Another of the terms of reference to the Royal Commission shows the form of organization the government has in mind and tasks for recommendations on "the extent of authority that might best be conferred on a national energy board."

Making it clear that the board must be subject to the authority of Parliament, the government asks for recommendations on its procedures.

First Suggestion

The first suggestion for a national energy board to co-ordinate federal policy on all forms of energy was made in **FP** three years ago this month.

It was later supported by the Gordon Commission in its preliminary report early this year, and now looks like being realized after Mr. Borden's commission has reported.

The urgency of a new and complete examination of Ottawa's responsibility for interprovincial and international movement of all kinds of energy was underlined by several current developments.

Here are some of the things which give special point to the timing of Mr. Diefenbaker's announcement:

- The new government's promise of a "national development policy" in co-operation with the provinces could not amount to anything until it had a policy on energy export and import.
- Recent decision by **British Columbia Electric Co.** to use Peace River gas for thermal generation of electricity exposed the absurdity of continuing to treat export of electricity and waterpower in a different way and under different authority from export of gas and oil.

In fact it turned recent policy topsy-turvy. The late government allowed gas export, but blocked export of electric power or of water which could be used for generation of electricity.

Now BCE's plans show that Canada might do better to use its gas at home even to generate electricity for export.

If anything is to be exported Canada would get higher price for electricity than for gas, and more "processing" would be done in Canada.

- Mounting pressures by rival interests for export of gas from southern Alberta to California have threatened to confront Ottawa with a very difficult situation.

On previous occasions—both with **Westcoast Transmission** and with **Tennessee's** still doubtful application — Ottawa has been left on the end of a chain of approvals.

By the time a company has got export approval from the Alberta provincial government and the U. S. Federal Power Commission, the federal permission to export necessarily becomes a yes or no propostion.

On the existing basis it leaves no chance for federal authorities to influence the nature of the deals.

As the rival applications for an Alberta - California route grew nearer, federal authorities were increasingly afraid of being again caught unprepared.

Increasing Concern

The whole rate-basis and prize-zoning for western gas flowing out to the Pacific coast has been causing increasing concern.

It has been intensified as BCE wanted more and more gas for the Vancouver area, and Westcoast Transmission talked about doubling its export sales.

It also threatens to become a more difficult problem as Westcoast Transmission finds itself having to pay escalating field prices in the Peace River area, while its export price is fixed at 22c (at the border) for the whole of the authorized export quantity for 20 years.

Fears have been expressed both in B. C. and in Ottawa that inland communities in B. C. would find themselves with an even larger spread between the price they pay for B. C. gas and the price paid by customers in the U. S.

As it is, the higher price paid by B. C. consumers worries federal authorities because of a standing regulation that export prices must not be lower than prices to domestic consumers.

The whole problem of regulating rates has been referred to the new Royal Commission. Its second term of reference reads:

"The problems involved in, and the policies which ought to be applied to the regulation of the transmission of oil and natural gas between province or from Canada to another country, including . . . the regulation of prices or rates to be charged or paid, financial structure and control of pipeline corporations in relation to the setting of proper prices or charges."

Finally, the commission is asked to investigate the special position of **Trans Canada Pipe Lines.** It is recommended: "Whether, in view of its special relationship to the **Northern Ontario Pipeline Corp.** and the nature of its financing and control, any special measures need be taken in relation to Trans Canada Pipe Lines Ltd., in order to safeguard the interests of Canadian producers or consumers of gas."

The members of the commission, besides Mr. Borden, chairman:

J. Louis Levesque, of Montreal, founder of "Credit Interprovincial Limitee" and connected with many financial and industrial concerns. George Britnell, economics professor at the University of Saskatchewan. George Cushing, vice-president of Canadian Labor Congress. Robert Howland, economist from Halifax, N.S., who supervised regional studies for the Gordon Commission. Leon Ladner, Vancouver lawyer, who has spoken and written widely and knowledgeably about B. C. energy problems.

Must Organize for Growth Survey Advises Business

Why do some companies expand sales and profits while others stand still?

Can successful corporate growth be deliberately planned, or is it an accident?

What are the common characteristics of growth companies?

These were among the questions asked in a survey entitled "Why Do Corporations Grow?" by Stanford Research Institute, Menlol Park, Calif. It was presented at a special meeting of the American Management Association in New York.

The study, said P. J. Lovewell of the Institute, showed that successful growth companies usually share four common characteristics:

- Organized programs to seek and promote new business opportunities.
- An affinity for growth products or fields.
- Proven competitive abilities in their present lines of business.
- Courageous and energetic management, willing to take carefully studied risks.

Progressive companies characteristically devote significant portions of their earnings to market development, new product development and acquisition planning, said Mr. Lovewell.

Broad Outlook

"It is typical of progressive companies that the entire corporation is aware of the significance of the planning function, and that there is broad participation in the business of planning."

The SRI investigators started with a group of 210 apparently "gifted" companies, selected as having exceptional growth histories.

For comparison, they also used a group of 169 companies whose growth performance had been well below average. Case histories of companies in each group were examined for the 1939-56 period.

"The number of companies absorbed by mergers and acquisitions is far greater, proportionately, among the companies of lower growth rates," said Mr. Lovewell.

"Our study makes it plainly evident that there is no pat formula for the achievement of business success. Energetic observance of good management practices does not provide absolute insurance that a company will grow and prosper.

"Good management and, especially, sound planning methods should rather be thought of as a means of improving the odds for success."

BOUGHT BUILDING

From Our Own Correspondent

WINNIPEG — The provincial government has bought an auto show room building on Portage Ave. for $150,000 for the staff of 125 employed in the motor vehicle registration department. An additional $60,000 has been spent in alterations.

Costs a Dollar Every Time You Make a Letter Mistake

(Special Correspondence)

What does it cost to write and send a business letter?

On the average, $1 to $1.25, including the time of the person who dictates it, his secretary, and the person who receives it, says Prof. J. N. Hook of the University of Illinois Department of English.

Communication is any country's biggest business, he says. "An unclear letter is a dollar wasted, and may lead to additional waste.

"If all the nation's business expenditures were lumped together, we should find that more dollars are spent for the sending and receiving of messages than for any other single purpose.

"Of the $6 billion payroll of U. S. railroads, two thirds of every one of their payroll dollars goes for the sending and receiving of written and oral messages—$4 billion of the $6 billion," says Prof. Hook.

"When you buy a $3,000 automobile, you are driving $1,500 worth of words along the highway.

"Every misunderstood instruction, every unclear letter or telegram, and every delay caused by failure to communicate accurately add to the cost of the automobile."

Dr. Hook, who is executive secretary of the National Council of Teachers of English, urges teachers to point up communication values by having students study the yellow pages of the telephone directory.

"They will probably not find one business or occupation that could long survive without the sending or receiving of messages," he says. "To the majority, communication is the life blood."

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We recommend that shareholders take advantage of the present opportunity to add to their holdings through the exercise of Rights. We also suggest these shares as an attractive investment for other than existing shareholders and shall be glad to advise regarding the more advantageous way to buy, *i.e.*, through purchase and exercise of Rights or by purchase on the open market.

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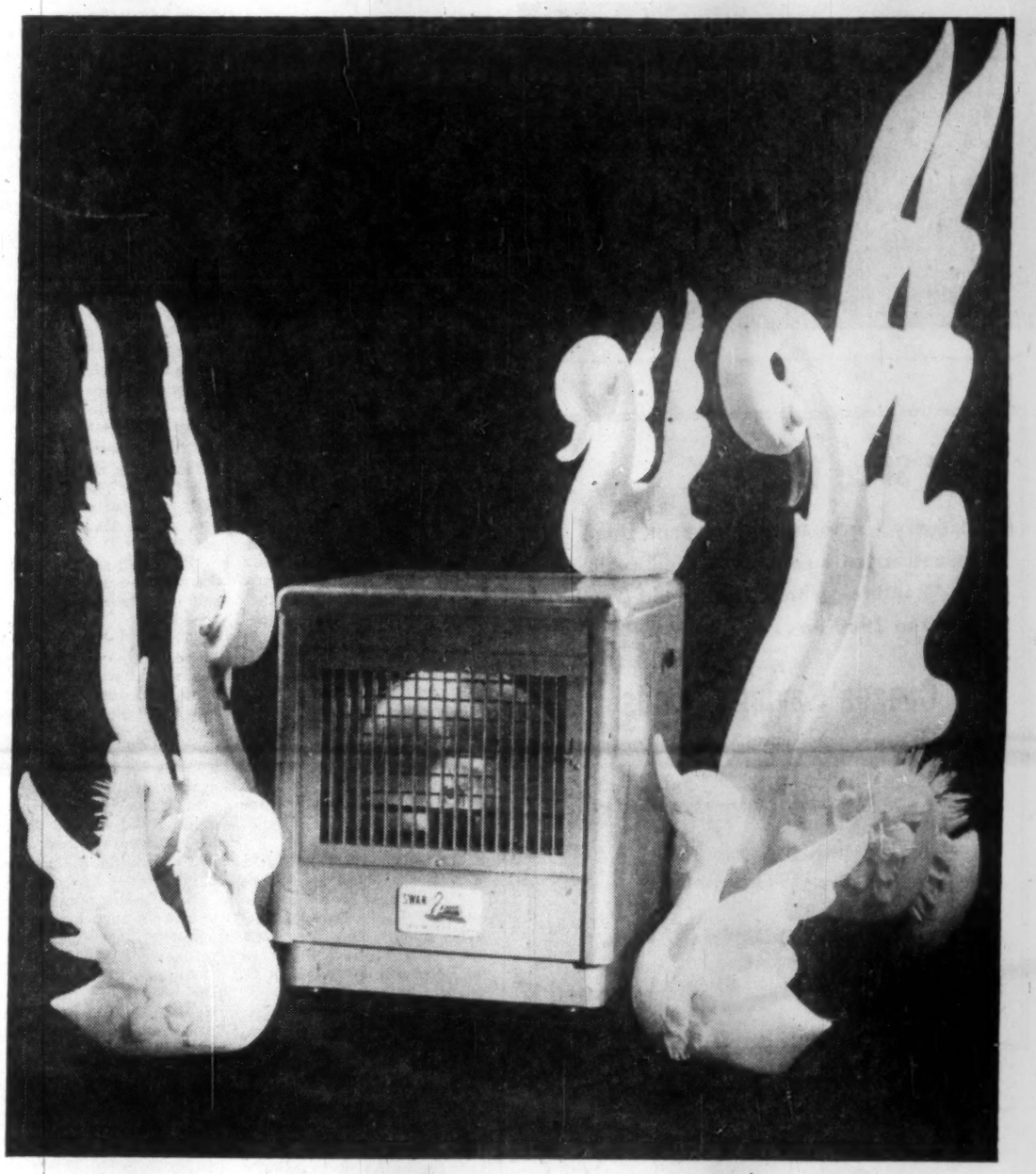

Art by Mia and Klaus

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ANNOUNCEMENT

FRUEHAUF APPOINTMENT

WILLIAM T. McDOUGALL

William T. McDougall has been appointed Comptroller of the Fruehauf Trailer Company of Canada Limited, it has been announced by Financial Vice-President E. Lorne Goodfellow. Mr. McDougall also becomes Comptroller of Trailer Acceptance Company Limited, a subsidiary handling the financing of Fruehauf trailer sales in Canada. He first joined Fruehauf in 1948 as General Accountant and in May, 1956, became Assistant Comptroller.

Note

By Vincent Egan

Investors will be watching this week's $35-million **Quebec Hydro** bond issue with keen interest. If it is well received, there will be reason to believe that the Canadian market can absorb three other major issues that are expected soon — $50 million Province of Ontario, $40 million Metropolitan Toronto, and $10-$15 million Metropolitan Montreal.

All four borrowers were reported to have been negotiating with New York investment dealers with a view to making a U. S. offering.

* * *

The past week has brought no major new corporate issues. But due to be offered almost immediately are $5 million **Anglo-Canadian Pulp & Paper Mills** 6¼% 21-year debentures, with a 15-year non-call clause and a full sinking fund, at par; and $3 million **Kelly, Douglas & Co.** 6% 20-year debentures, with 75 warrants to buy Class A shares at $4.25 for four years and $4.75 for a further four years.

* * *

Shareholders of **Zeller's Ltd.** will vote October 24 on a proposed bylaw enabling directors to borrow. The retailing chain, which has had no funded debt since 1943, is expected to undertake bond financing shortly (**FP**, Oct. 12).

* * *

Day-to-day loans were being made by chartered banks to investment dealers this week at 3¾%, down from last week's 4%. Banks have been able to meet all requests for loans; recourse to the Bank of Canada has not been necessary, as it was last week.

* * *

City of **Peterborough** has called for tenders on a $1,384,358 5½% one-to-20-year issue. **Kitchener** is calling for tenders on $1,224,000 serial debentures, in nine and 15-year maturities. Both calls close October 21.

* * *

When the extended share exchange offer by **A. V. Roe Canada Ltd.** to **Dominion Steel & Coal Corp.** shareholders expired last week, Roe had been offered 2,228,817 ordinary shares or their equivalent. This represents about 76% of the outstanding Dosco stock.

* * *

The proposed merger of **Isotope Products Ltd.**, Oakville, Ont., and **Curtiss-Wright of Canada Ltd.** will be presented to shareholders for approval in about one week, when auditors have verified Curtiss-Wright's accounts. The Oakville firm's executive is "enthusiastic" about the merger, said President D. C. Brunton.

* * *

Commodities: Demand for flax continues strong, pushing prices up. Overseas orders for barley, on the other hand, have virtually ended. The Board's 1½c cut in prices of all grades of wheat has had no noticeable effect on demand.

* * *

Investors like specific advice.

A prominent New York investment house, **Bache & Co.**, a few months ago presented for the first time a "buy, sell or hold" list of stocks in its market letter.

"The response from investors was overwhelming," says Bache. "Many told us we had given them more sound, right-to-the-point advice in that piece than they had received from other sources in years."

It presents a revised list in the current letter.

* * *

Keeping track of the thousands of shareholders of **American Telephone & Telegraph Co.** isn't easy. But the firm has devised a simple system—shareholders who have moved are asked to write their new address on space provided on the dividend cheque. When the cancelled cheque comes back, the company changes its records.

* * *

A study of U. K. income tax and profits tax has been issued by the Canadian Tax Foundation as the third in its series of pamphlets, Taxes Abroad.

Biggest-Ever Power Scheme Depends on Survey Results

Though promising results have been obtained from a preliminary aerial survey of a possible four million hp hydro-electric development on Peace River in northern B. C., any decision to go ahead with construction will be dependent on more detailed investigation.

The proposed hydro scheme, one of the most spectacular of its kind in Canada, is an integral part of a general plan announced early this year by the **Wenner-Gren Foundation** and the B. C. government. It was to check, and if feasible, develop a 40,000 sq. mile area in the far northern Rocky Mountain Trench in B. C.

The company formed for the project, **Wenner - Gren B. C. Development Co.**, posted a $500,000 bond with the B. C. government about eight months ago as a guarantee that surveys would be carried out. In return, the B. C. government placed a reserve on the lands and timber in the area.

Among projects to be undertaken, if surveys justified them, were the establishment of a pulp mill, building of townsites and construction of a 180 mph 400-mile-long monorail from the Pacific Great Eastern line to the Yukon border.

But last week, a special agreement between the Wenner-Gren interests and the B. C. government was signed in connection with the proposed hydro-electric development on Peace River.

It made special provision that the development was contingent upon the results of surveys over the next two years.

Survey Results

This week, **British Thomson Houston Co. (Canada)** told **FP**: "We have been doing the preliminary aerial survey all summer.

"It looked so interesting that we reported early, and as a result have been instructed to go ahead with the next stage.

"This will consist of more detailed contour surveying to find out where water levels would come, and some rock drilling to check up on various possible dam sites.

"This stage will not involve a lot of manpower. We are now organizing for the work. Several crews will be sent in for drilling and we will be consulting with the engineer in charge of this job in B. C. within the next three or four weeks."

Early estimates of the cost involved in such a power development vary between $400 million and $600 million.

Announcing the agreement on the project, Premier W. A. C. Bennett said a dam would be constructed just east of Finlay Forks on Peace River before it flows east through the Rocky Mountains.

He said the dam would create in the Rocky Mountain Trench a lake 260 miles long and 10 to 15 miles wide. It would be the greatest man-made lake in the world.

No diversion of rivers would be necessary. The plan would back up the Finlay River, from the north, and the Parsnip River, from the south, which merge at that point to form the Peace.

Long-Term Project

But this will be a long-term project, even if it goes ahead.

It would take seven years to fill the man-made lake.

Thirty mile sections of the railway and the Hart Highway would be re-located at Wenner Gren expense.

Premier Bennett emphasized the Wenner-Gren subsidiary, which will have two B. C. directors, will pay full taxes with no special concessions. He said Canadians would be given full opportunity to invest in the company.

The Swedish subsidiary will have until Dec. 31, 1959, to complete its surveys. They could cost up to $6 million.

The big loophole for the firm is that if final reports do not measure up to the preliminary conclusions as to the area's potential, then the survey can be abandoned.

If found feasible, a firm commitment may be reached. As it stands now, it is all in the realm of dreams.

Experts Guessing

A number of statements made by Premier Bennett on the results of the hydro project had the experts wondering.

One was that power generated on the Peace could be laid down in Vancouver, 500 miles away, at rates "cheaper than those now charged by the **B. C. Electric**."

When quizzed, he said hydro engineering techniques "that aren't even in the books yet" would make it possible. The techniques were unknown to local power engineers.

He then said that industry in the areas adjacent to the dam site would get first call on power at cheaper rates. (The only community of any consequence near the dam site is the city of Prince George, and it is 150 miles away. The only inhabitants in the Rocky Mountain Trench are a few poverty-stricken bands of Indians.)

The premier also said the rest of the power would be sold through the government-owned **B. C. Power Commission.**

He did not mention the privately-owned B. C. Electric which services the major population areas of the lower mainland. He did say, however, that utility companies would be able to buy the power.

Another statement that baffled the experts was the premier's belief that the project could change the climate of the Arctic! When queried for fuller explanation, he did not elaborate.

British Thomson Houston estimates that the proposed development could start delivering power by 1964.

Sources in Ottawa state there is nothing really new in a plan to develop the hydro potential of the Peace.

Major General A. G. L. McNaughton, Canadian chairman of the International Joint Commission, said Peace River development had been studied and appeared practical.

In 1955, George J. Smith, a surveyor who did the original Kitimat-Kemano work for **Aluminum Co. of Canada**, presented a paper on northern B. C. water resources to the B. C. Resources Conference.

He suggested that one million hp could be generated by damming the Peace in the Rockies.

Engineers say one million hp is possible. Another million hp might be generated if the dam was built much further east than has been indicated. If the waters backed up by a dam could be diverted at Giscombe Rapids into the Fraser, then a capacity of four million hp is possible.

But the premier did not mention any diversion into the Fraser. That would have brought the powerful fishing interests about his head like a swarm of bees.

U. K. GETS B. C. ORDER

Orders for six turbo-generators for the new 1.2 million hp. steam plant of **B. C. Electric Co.**, to be located east of Vancouver, have gone to **Metropolitan Vickers Electrical Export Co.** of Britain.

The contract is worth $25 million, and **Canadian Westinghouse Co.**, which acted as agent for the U. K. company, said it was obtained in face of keen competition from European and U. S. companies.

250 Exporters Set For Quebec Meet

MONTREAL (Staff) — About 250 exporters and Federal Government trade officials will attend the annual convention of the Canadian Exporters' Association at the Seigniory Club, Que., Oct. 21 and 22.

Minister of Trade and Commerce Gordon Churchill will be the main speaker.

President J. S. Vanderploeg, of Toronto, will present a report on the opening day.

F. T. Sherk, of Leamington, will outline the association's trade policy statements, covering Canada-U. S. trade relations; Commonwealth trade; assistance to new members of the Commonwealth; long-term financing facilities for export; European common market and proposed free trade area.

A round table "Exporters' Clinic," will b held Oct. 22 to include discussions on markets, terms, marine insurance, shipping, Canadian and foreign currency problems, seaway tolls, advertising.

A special session will discuss conference shipping rate adjustments on products indigenous to Canada.

At present, the CEA says shippers of such products are often told by the lines serving Canadian ports that the agreement to any adjustments must be obtained from the shipping conference in New York.

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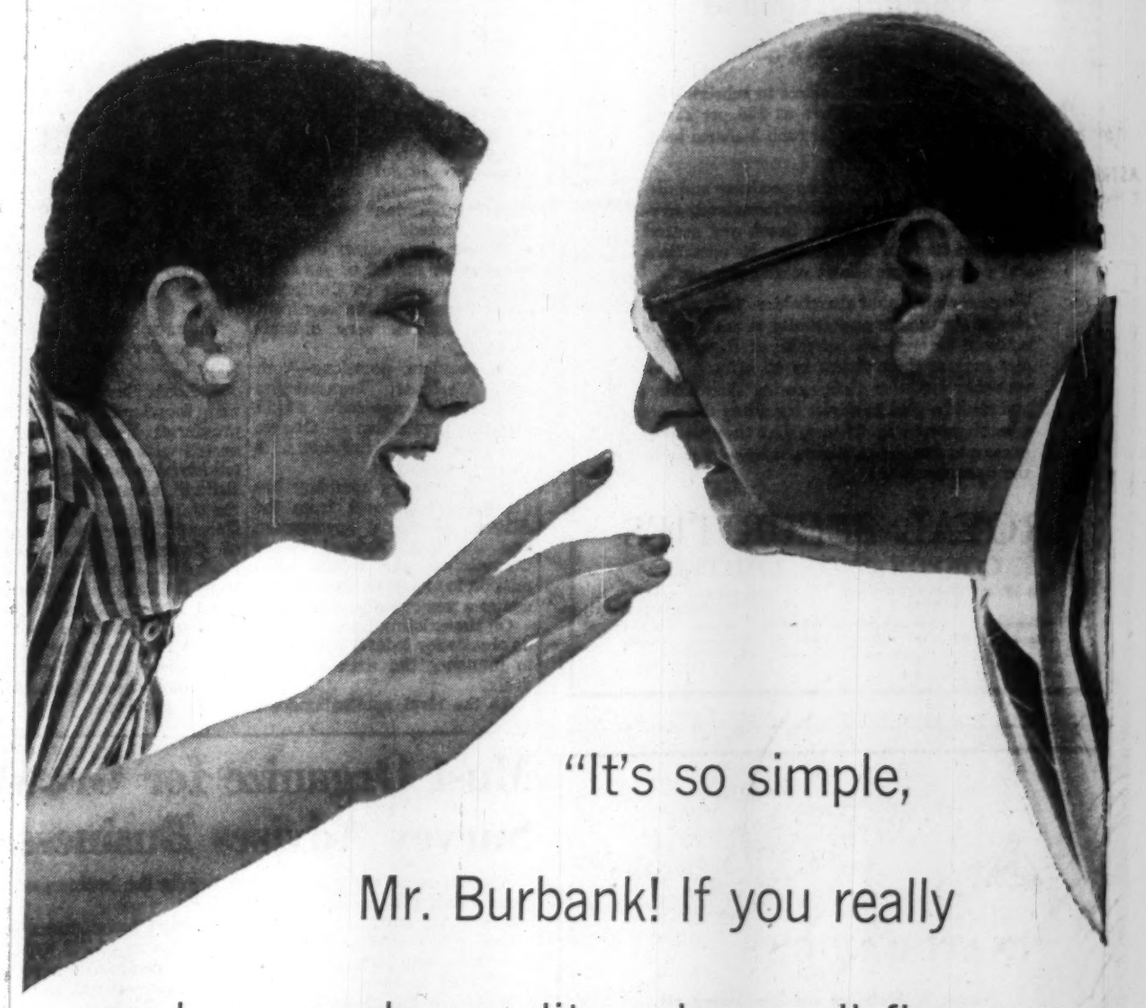

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ANNOUNCEMENT

CANADIAN PREMIER LIFE APPOINTMENT

NORMAN A. HEALEY

F.A. Lang, President of Canadian Premier Life Insurance Company, announces the appointment of Norman A. Healey, B.A., B.D., C.L.U., as Director of Agencies at the Company's Head Office in Winnipeg. Mr. Healey is a graduate of the University of Toronto and the School of Graduate Studies. He was formerly Assistant Superintendent of Agencies in Eastern Canada, where he is well known in insurance circles. He has been frequently in demand as a public speaker, before Life Underwriters' Congresses, and Insurance Associations generally.
Mr. Healey served in the Mediterranean Theatre during the last war. In addition to having his C.L.U. degree, he is a graduate of the 142nd School of Agency Management. He will assume direction of the Company's Agency operations throughout Canada.

U.K. Immigrants

They Like Way We Live, Work, Play, Says Survey

British immigrants like Canada—although they miss many aspects of U.K. life, ranging from the National Health Plan to the sea.

The research department of **Maclean-Hunter Publishing Co.** surveyed 96 immigrants from the U.K. in the Toronto area.

On balance, it found they had adjusted quickly and fairly easily to life in Canada.

They like the standard of living and the chance to own an automobile.

Three quarters are solidly established here, the remainder are at least considering the possibilty of going back home.

Sixty-eight of the 96 got jobs within two weeks of their arrival.

Only eight said they had to wait more than five weeks for work.

The great majority have been in this country for five years or less. About one third have lived in Canada for longer periods.

The higher standard of living is an obvious asset and 33 of the 96 (34.4%) listed it as an aspect of Canadian life which they enjoy.

This was easily the most often mentioned point.

But there were a lot of others.

Friendly, Informal

A dozen immigrants liked Canada's informality, another 12 specified Canadians' freedom of approach in business matters.

Ten mentioned friendliness, nine a feeling of economic growth.

Seven warmed up to Canada because of its well-heated houses. Others liked the food, the supermarkets, Canadian sports, dollar currency, movies, comfortable trains, week ends at the cottage.

One mentioned the CBC. On the other hand, 12 said they missed the BBC.

Other single laudatory mentions went to things like fishing, do-it-yourself, ice cream, harness racing.

Cultural and social activities rank high as things which immigrants miss most from their life overseas.

Pubs, live theatre and proximity to the country and places to walk were most frequently mentioned as U.K. institutions missed by immigrants.

Also missed: Sociability (12), leisurely pace (11), British Sundays (nine).

Others missed certain parts of the British scene like the sea (16), the newspapers (12), London (nine). Four thought longingly of the National Health Plan.

A few out-of-the-ordinary mentions: "Clean" political campaigns, good fish and chips, football pools, band concerts, lack of female company.

Two thirds of the immigrants now own cars, while only one third had autos when in the U.K. Four fifths of the car owners have a North American type, rather than a British or European car.

Excluding two people who made spectacularly high estimates, the average immigrant felt he would have to earn £21, before taxes, in Britain to equal his current Canadian living standard.

Generally, many of the immigrants cut their ties with the U.K. Only 12.5% are members of clubs or associations composed mainly of people from the U.K. A slightly larger percentage of close friends of the surveyed immigrants are Canadians rather than U.K. people.

They are good fans for Canadian sports.

Some 36.5% have attended a baseball game more than once, 26% a Canadian football game, 41.7% a hockey match.

They are pretty good on corn roasts (24%), wiener roasts (34.4%) and hunting and fishing (50%), too. A surprising three in 10 had been skating more than once.

Though they like our sports and living standards, they're worried about Canadian education.

Six of 10 think our schools are less satisfactory than those in the U.K. Only 4.2% think they are better.

Canadians are friendly. That is the 80% verdict. Only eight of those questioned said Canadians are unfriendly. Eleven didn't express an opinion.

And a tip for travel agents: Almost one quarter have made one or more visits to Great Britain since settling here.

Yearn for 'Pub'

Immigrants from the United Kingdom vote strongly for Canada's high standard of living but yearn for the English "pub."

Here are some of the results of the Maclean-Hunter survey of 96 Toronto-area immigrants from the U.K.

What aspects of Canadian life do you enjoy?

High standard of living—34.4%.
Outdoor life—20.8%.
Opportunity for advancement—19.8%.
Climate—15.6%.
(These were the most frequent replies.)

What aspects of U.K. life do you miss most?

Pubs—34.4%.
Live theatrical entertainment—28.1%.
Proximity to country, places to walk—18.8%.

How long were you here before you got your first job?

Less than one week—29.2%.
One to two weeks—41.7%.
Three to five weeks—19.8%.

Might you return to the U.K. to live?

Definitely will—none
Seriously considering—4.2%.
Might return—20.8%.
Firmly established in Canada—75%.

Central Explorers Okay Plan To Acquire Hadley

Shareholders of **Central Explorers** have approved a plan to acquire **B. H. Hadley Inc.**, U.S. manufacturers of parts for automobile and aircraft industries.

The purchase will be made by an exchange of 1,160,000 Central shares for all the issued shares, 116,000, of Hadley. Central shareholders have also approved an increase in capitalization from two million to four million shares to carry out this acquisition.

Mid-week market price of Central Explorers was $2.45. There has been no market for Hadley shares.

A proxy statement to Central shareholders indicates the company plans to organize a U.S. company which would control the Hadley firm, **Central Explorers Oil Co.**, a U.S. firm, plus a new Canadian company to be organized to acquire the Canadian assets of Central on a share-for-share basis.

Purpose of the change is to avoid "any impediment there may be under U.S. laws and regulations" to Hadley which holds U.S. defense contracts, a company statement says.

B. H. Hadley, formerly **Capson Inc.**, operates the businesses of **B. H. Hadley Co., Stellardyne Laboratories Inc.** and **United Atomics Corp.** which have been engaged in design and manufacturing of special machine parts and tools for autos and aircraft, and in the production of valves and other component parts for aircraft and missiles.

Central Explorers management says acquisition of the Hadley operation was proposed to diversify Central's operations.

The company has been carrying out exploration and production of oil and gas in western Canada and Texas. Central had a net loss of $395,836 in 1956 and of $47,134 in the first five months of 1957.

MacMILLAN & BLOEDEL LTD. during September converted an additional 150 Class A shares into same number of Class B shares. Now 32,639 A shares and 5,252,899 B shares outstanding.

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25 Countries Will Pave Way For Jet Age

MONTREAL (Staff) — Talks begin next week in Sao Paulo, Brazil, that will lay the ground work for bringing the South America - South Atlantic area into the new commercial jet age.

For a month from Oct. 22 delegates from Some 25 countries will meet in the ornate Pavilhao Das Nacoes at the third regional air navigation meeting.

Meetings will be held — and documents produced—in Spanish and English. Besides representatives of countries in the area, there will be those from nations whose carriers operate on the routes.

Delegates will discuss how to bring the navigational aids, air fields, weather services, air traffic control systems and other services up to date for the jet airliners due in the area within the coming five years.

Purchasing Agents Grant High Award

Alan L. Francis, assistant general purchasing agent, **Goodyear Tire & Rubber Co.** of Canada, has been named a Fellow of the Canadian Association of Purchasing Agents.

The award was a recognition of his major contribution toward establishing an autonomous Canadian purchasing association, while retaining affiliation with the U. S. body, the National Association of Purchasing Agents. It is the highest award in Canadian business purchasing.

Mr. Francis, who was also vice-president of the American organization, became the Canadian association's first president in 1955; is also a past president of the Purchasing Agents' Association of Toronto.

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Brochure on request

More Tourists Are Holidaying In Hawaii

Hawaii's popularity for tourists continues to snowball. From Jan. to the end of July, 94,710 vacationers spent two or more days in the islands — an increase of 21% over the same period last year.

At this rate, there will probably be about 162,000 visitors during 1957, or 28,000 more than during 1956.

Forecasters estimate that the number of annual visitors may reach 330,000 by 1965, six years after commercial jets are scheduled to begin regular service.

To accommodate increasing numbers of visitors, new hotels are being built, old ones enlarged.

Hotels now building at Waikiki include a 12-story unit adjacent to the **Reef** and **Edgewater** hotels and a 14-story unit at Henry J. Kaiser's Hawaiian Village.

A 720-room hostelry, to be called **Hawaiian Queen,** is planned for the grounds of the International Village and Market Place.

Honolulu (on Oahu Island) is not the only stop for tourists. Visitors are spilling out to the other islands in the group — Hawaii, Maui, Lahaina, **Kauai,** Molokai.

Here too, hotels are being built to keep up with increased tourist demand. On Hawaii island two new 100-room hotels have been announced for the scenic "Marlin Kona" coast.

On Maui, several developments have been announced, including a projected $36 million resort at lovely, uncrowded Kaanapali Beach. And at Kauai, film location for "South Pacific," plans have been announced for a new hotel at HanaLei near the Bali H'ai village setting.

Travel Briefs

Families travelling by air to Europe, can save $200 or more if they travel between Nov. 1 and March 31.

On Family Plan European rates, airlines charge full fare for the husband, but allow $200 off regular fares for the wife and each child (12 years and over). The family must go together, but the husband may return separately.

• • •

Sneeze-free holidays is the subject of a new booklet available from the Canadian Government Travel Bureau in Ottawa.

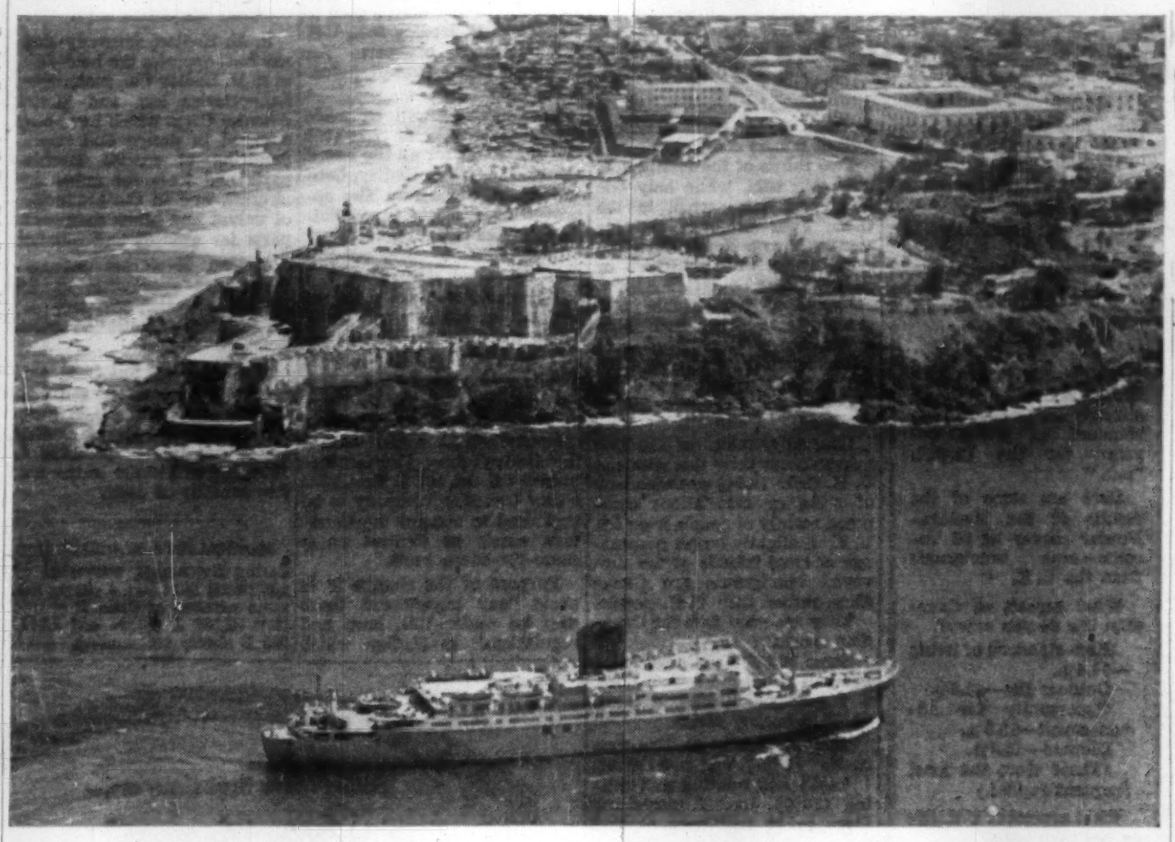
Entitled "Canadian Havens from Hay Fever," it lists various regions throughout Canada where hay fever sufferers can vacation in comfort.

• • •

Ocho Rios, Jamaica's newest north shore resort area is getting a new 16-store shopping centre. It's due to open Nov. 15. John Pringle, managing director of Montego Bay's luxurious **Round Hill,** is head of the project.

POST TRAVEL BUREAU

Where to go - how to go - where to stay



CRUISE SHIP steams into San Juan harbor past the massive fortress of San Filipe del Morro, famous Puerto Rican landmark.

Isle of Spanish Flavor

By BEATRICE RIDDELL

Foreign but familiar.

This is Puerto Rico, the Spanish-American island in the heart of the Caribbean where the best of the old world and the new are found.

Said to be the most European of the Caribbean countries, it is Spanish in language and culture. Yet it is part of the U. S. and modern American efficiency complements Spanish colonial atmosphere.

There are twisting cobbled streets, grilled balconies, gracious old buildings. There are also skyscraper office buildings, ultra-modern hotels, and smooth, broad highways.

In San Juan, the capital, this split personality is most apparent. Here you can live in the old world or the new. There are modern bars and night clubs as well as cosy Spanish haunts where the songs and dances are European.

You can eat typical North American fare, or delight in excellent Spanish cuisine.

Tourism has become one of the island's most important industries. To take care of the ever-growing volume of tourists, new hotels are appearing, older ones being expanded.

Daily rates range from $6 to $17 single, European Plan. But cheaper accommodation is available in guest houses — some are old colonial homes.

Puerto Rico is a stop for cruise ships. During the coming Christmas season five cruise ships are scheduled to dock in San Juan's colorful harbor.

The majority of visitors come by air. It is only ten hours by plane from Toronto to San Juan's modern International airport. Return fare is $226 first class, and $174, tourist.

Climate and geography make Puerto Rico a "natural" vacation land. At the height of summer, it can be hot in the capital (up to 85 deg), but it is always cool in neighboring hills and mountains. In winter, the coastal and lowland areas average 70 to 80 deg. There is little rain.

There are excellent facilities for all the popular holiday sports. There are plenty of tennis courts and golf courses. Swimming is magnificent. There are pools and beaches at the larger hotels, and Luquillo Beach, a few hours' car drive from San Juan, is one of the Caribbean's finest.

Puerto Rico is a fisherman's paradise. Charter boats, equipped with the best deep-sea fishing rig cost $65 per day for six people. The over-all price includes, bait, tackle, crew and gasoline.

If your prefer tarpon fishing, a four-passenger boat will cost $30 for the day.

Golf and fishing tournaments take place throughout the year, and visitors are invited to take part.

For the spectator, there is always something going on in Puerto Rico. There are cultural events such as ballet and music with world-famous artists performing. There are baseball games and cockfights. Horse racing at the fabulous new El Comandante Race Track takes place all year long.

Colorful Fiestas

And almost every season has its colorful fiestas and harvest festivals. Typically European, these gay events last for several days and include parades, street dances, costumes, balls, regattas.

The visitor usually makes San Juan his headquarters. The hub of the island, it boasts ancient forts and cathedrals, and the finest modern holiday facilities.

But save some time to see the rest of the 100-by-35 mile island. A drive through the countryside reveals the real Puerto Rico with quaint Spanish villages, great plantations and lovely scenery.

Attractive hotels and inns are found throughout the country.

Car rental agencies offer "package" deals that enable the visitor to explore the island at his own pace.

Over-all price usually includes car rental, gas, oil, insurance, hotel reservations, breakfast and dinner each day. A typical daily rate for two people is $67. It costs less per person for larger parties.

Here are some of the major points of interest:

• **El Yunque,** a 3,400-ft. mountain, surrounded by a delightful tropical rain forest, towers above Luquillo Beach. At the top of the mountain is a charming, rustic resort with central lodge and cabins. Here there are crystal-clear swimming pools fed by mountain streams.

• **Ponce,** Puerto Rico's second city, has many fine examples of Spanish architecture.

• A little northeast of Ponce is the famous spa of **Coami Springs** — as popular today as in colonial times. Nearby is historic San German.

• **Mayaguez,** is the centre of the needlework industry and site of the University of Puerto Rico. Trips to nearby pineapple plantations are recommended.

• **Arecibo,** venerable town of the Spanish Conquistadores, is now the home of one of the world's most modern rum distilleries. Here also are Indian caves and interesting relics of the earliest inhabitants.

• **Barranquitas,** almost at the centre of the island, is high up in the mountains and surrounded by coffee plantations. You can stay on a plantation. It is recommended for a quiet visit and a novel experience.

• **La Parguera,** on the south coast is gateway to Phosphorescent Bay — one of Puerto Rico's most famous sights.

• Islands off the coast should not be missed. They are delightful for picnics, swimming, and sunbathing.

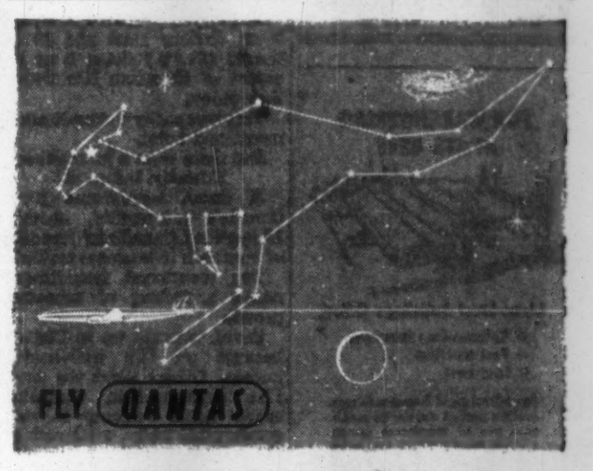
What the Dollar Is Worth Round the World

Here's a handy list of what the U. S. dollar is worth in various currencies of the world. These foreign exchange rates, compiled by **Deak and Co., Inc.,** were those prevailing on Oct. 8.

		Bid	Asked
EUROPE			
Austria	100 Schillings	$3.70	$3.90
Belgium	100 Francs	1.92	2.02
Denmark	100 Kroner	13.85	14.40
Finland	1000 Marks	2.45	3.10
France	1000 Francs	2.15	2.29
Germany	100 Deutsche Marks	23.25	23.80
German E.	100 East Marks	5.60	6.50
German Lib. Capital DM	100 D. Marks	23.95	24.15
Hungary	100 Forint	1.20	1.70
Italy	1000 Lire	4.55	1.61
Netherlands	100 Guilders	25.30	26.35
Norway	100 Kroner	12.85	13.85
Portugal	100 Escudos	3.45	3.60
Spain	100 Pesetas	1.75	1.89
Sweden	100 Kroner	18.40	19.20
Switzerland	100 Francs	23.20	23.40
U. K.	1 Pound	2.52	2.68
Resident	1 Pound	2.67	2.72
Transferable	1 Pound	2.75	2.78
Yugoslavia	1000 Dinars	1.50	1.90
AFRICA-ASIA			
Australia	1 Pound	1.97	2.07
Burma	100 Kayats	7.00	9.00
Ceylon	100 Rupees	15.00	18.00
Egypt	1 Pound	1.70	1.90
India	100 Rupees	19.00	20.00
Japan	1000 Yen	2.45	2.60
New Zealand	1 Pound	2.45	2.55
Pakistan	100 Rupees	12.20	14.20
Philippine	100 Pesos	28.50	31.00
WESTERN HEMISPHERE			
Argentina	100 Pesos	2.25	2.40
Bolivia	1000 Bolivianos	.105	.125
Brazil	100 Cruzeiros	1.15	1.31
British W.I.	100 BWI $	53.00	58.00
Canada	100 Canada $	103.00	105.00
Chile	100 Pesos	.11	.15
Colombia	100 Pesos	13.00	18.00
Cuba	100 Pesos	97.00	99.00
Curacao	100 Guilders	48.50	52.50
Ecuador	100 Sucres	4.90	5.40
Dominican R.	100 Pesos	97.00	99.00
El Salvador	100 Colones	35.00	39.00
Honduras	100 Lempiras	42.00	49.00
Jamaica	1 Pound	2.40	2.60
Peru	100 Soles	5.00	5.50
Uruguay	100 Pesos	22.75	25.00
Venezuela	100 Bolivars	29.35	29.90

The Canadian Tourist Assoc. will hold its 25th annual convention at the **Chateau Laurier Hotel,** Ottawa from Oct. 22 to 25. "Know Canada Better" will be the theme of the meeting, and discussions will centre on the problem of persuading Canadians to holiday in this country. Other subjects on the agenda include improvement of tourist facilities, levelling the holiday peak periods and speculation on the problems of travel in the future.

Hon. Vincent Massey, Governor General of Canada, and Prime Minister Diefenbaker will address the dinner meetings.



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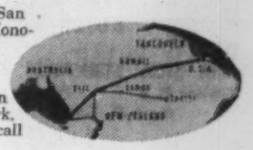

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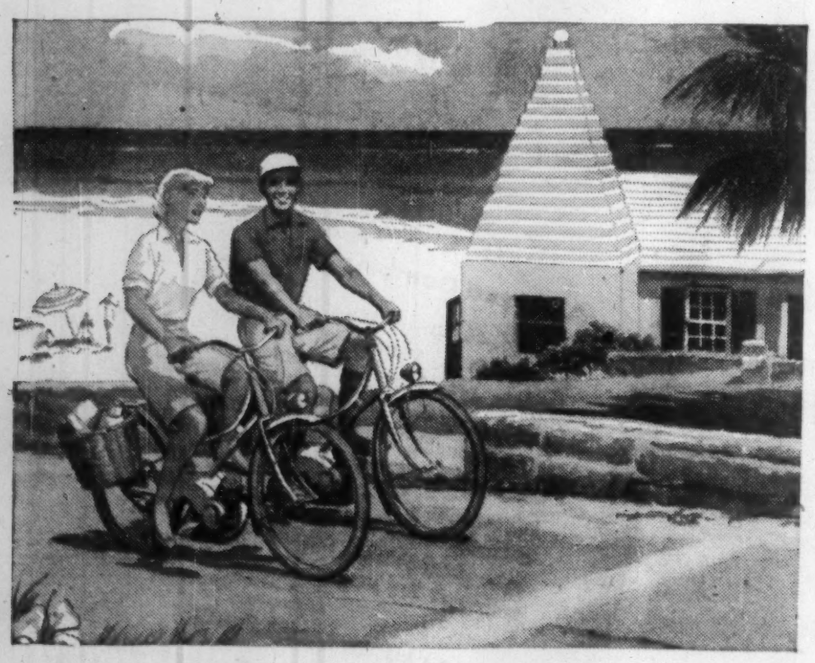

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ANNOUNCEMENT

SCHWARTZ & SONS, LTD. ANNOUNCEMENT

MR. CARL C. BOGGILD

Mr. W. H. C. Schwartz, President of W. H. Schwartz and Sons, Limited, with Plants in Montreal and Halifax, announces the election of Mr. Carl C. Boggild to the Company's Board of Directors. Mr. Boggild has been with the Company for 18 years, and for the past 5 years has been Manager of the Montreal operation. He will continue to act in this capacity.

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Bruce Hutchison writes about:

Above the Clouds

By BRUCE HUTCHISON

While we started on horseback toward the Rockies the stock market, at latest report, was as level and solid as the prairies around us.

But while we were climbing up the mountains the market moved in an opposite direction.

We knew nothing of that until we emerged, weeks later, to hear vague rumors in remote ranch kitchens and to read our first newspaper in a month.

The sound of falling stocks does not reach the inner recesses of the mountains. It means nothing above the timber line and the clouds.

A wealthy man who accompanied me on that journey lost, on paper, a sizeable fortune before his return. I also had become, theoretically, a little poorer.

Oddly enough, when we read the latest market quotations at Jim Riviere's place outside Pincher Creek, they didn't seem to matter in the least.

For in the interval we had seen something more substantial and durable than the market. We had seen the substance of which the market is mere shadow.

The old scenery was there, of course, the shattering, cold presence of the Rockies, range on range, as visible only from a height of 10,000 ft., the furious convulsions of wind, snow and rain far below us and, at night, the frosty stars.

The Real Wealth Lay All Around, Clear To See

There was much more than that, however. The real wealth of Canada lay all around us, clearer to the eye in this thin upland air than it sometimes appears to the market at sea level.

After a day's hard ride through the foothills we looked down from our first camp upon the prairies. They were yellow with a richer gold than the metal of that name.

The last grain was coming in and if it could not all be sold immediately, if its selling arrangements were out of joint and its economics deranged, nevertheless it was real wealth.

The good earth, stretching from here to the Lakehead, would surge up in growth again next spring, and every spring, careless of men's passing follies.

At the base of the mountains we came upon herds of cattle fat with wild grass, each animal containing half a ton of human nourishment.

And though the grass ranchers are worried by the market at the moment, especially by the new competition of prime, grain-fed cattle on the farms, those things will sort themselves out.

The grass grows and will always grow on the rangeland. The beef will grow there, too.

The little white-faced dogies of this autumn will be massive cargoes of useful protein about a year hence. They, too, are wealth.

With Riviere, that best of mountain guides, leading the way on his big chestnut horse, we crossed a naked summit of rock in a blanket of fog to descend into the valley of the Castle River and there again we found a more fundamental process than the market at work.

Some 20 years ago a famous forest fire engulfed these regions and left a limbo of black skeletons, through which we cut our way with axes in the dark, but a new forest had grown up through the debris.

That same crop, the nation's oldest and most valuable, was sprouting from here to the Pacific. Perhaps the markets of Toronto and Montreal had lost sight of it.

Stumbled Upon White Stakes, Red Ribbons

Still less known and more improbable, in many places that few Canadians have ever seen or heard of, we stumbled upon certain white stakes and red ribbons, as if some child had been playing games here.

These were the markers and bright banners of the western revolution. The seismograph crews of the oil companies had passed this way and marked the promising spots.

Drillers and machinery would soon follow.

The incalculable western oil and gas pool is not confined to the prairies. It oozes out to the continental summit. The Rockies float on a hidden sea of wealth.

Already, in a narrow valley where we had toiled by a winding trail only a year ago, the largest oil rig in the nation had driven its steel bit almost a mile through the mountain rock.

In a silent glen, a suburb of fairyland, we found to our amazement a queerly shaped black pipe thrust from the earth and sprouting valves, taps and metal branches.

It looked rather like a black, burned Christmas tree and that is the name the natives give it.

The drillers had proved up a giant gas well, capped it for future use and departed, leaving nothing but this curious little monument.

In due time the valves will be opened and fuel for men's cities will pour out of that glen. As we passed, a band of elk grazed a few yards from the metal Christmas tree.

This scene of peace and silence was quite undisturbed by the market's commotion. No fall in prices could reduce by a single cubic inch the torrent of wealth ready to pour out of the earth when the taps are turned on.

A Canadian may feel bearish these days if he loks only at the daily stock quotations. He may be confused if he listens only to the arguments of the experts. He may be alarmed if he listens to the politicians.

Once Beyond The Gravel Lies a Truth

But once he gets beyond the last gravel side road, once he is outside the range of ticker tapes, newspapers, radio and telephone, once he glimpses the Canadian land crammed with civilization's essential materials, and finds everywhere men who know how to tap them, why then he sees the current economic picture with a sudden new clarity.

This reporter knows nothing about business and not much more about horsemanship, but it seemed to me that I had re-learned much about the true economics of Canada in my ride across plain and mountain.

To be sure, there are strains, distortions and many jagged edges in the current business of Canada and the world, though we remain highly prosperous.

There are strains even in the opulent oil, cattle and farm kingdom of southern Alberta.

The follies of a long boom, here and elsewhere, will require readjustments, some of them no doubt painful. The cycle of pause, consolidation and advance is as sure in human affairs as in the tides of the sea.

Yet any man looking even at one small segment of our half-continent, seeing it as it really is at first-hand and not second-hand in the temporary image of the stock market, will come home in a very bullish state of mind.

My rich friend had set out rather doubtful and apprehensive about his investments.

He came home to find that his apparent losses were heavy. If he had remained in the city, among the shifting symbols of finance, he would have suffered grievous mental agony.

Instead, on reading last week's papers in Riviere's ranch house, he telephoned to Vancouver and instructed his broker to buy more stocks.

He was no longer blinded by flashing figures. He had seen the real thing for himself. Half our trouble these days is that few Canadians ever see it.

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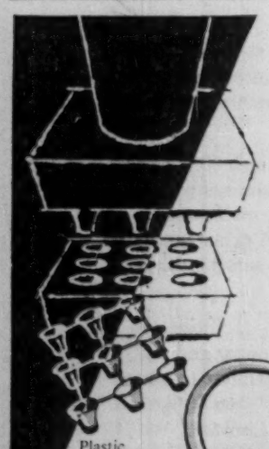

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Another New Cement Plant Slated for Edmonton Area

Plans for still another cement-manufacturing plant in Canada—at least four have been completed within the last 18 months and two others are under construction—have been drawn up by a new Alberta-incorporated company, **Imperial Cement Ltd.**

Proposed location is near Acheson, about 12 miles north of Edmonton in the same marketing area of the existing plants of **Canada Cement Co.** and **Inland Cement Co.**

The sponsors, a group of Edmonton businessmen, plan to use large deposits of marl—a soft limestone-clay mixture—at Big Lake, some three miles north of Acheson, as a raw material.

Cost of the proposed plant is in the region of $12 million, and the company is offering 110,000 common shares at $6.75 to complete initial financing.

George H. Morrow is president of the new company which has acquired exploration rights and leases on about 5,000 acres of marl deposits at Big Lake and has retained **Sumner Sollitt Co.**, Chicago engineers and consultants, to prepare plans for construction of a plant with a one-kiln capacity of about 700 tons of cement daily.

The company expects to enjoy a cost advantage in the transportation of basic materials.

It states: "Where most cement plants must consider the cost of quarrying and railroad haul from the leases to the plant, Imperial Cement, through a scientific use of feeder pipes and pipeline transportation has virtually eliminated these costs."

It also states the conventional processes involved in grinding basic material will be by-passed by the automation of the new operation.

A combination of lake water, marl and other ingredients while being transported by pipeline to the plant, will provide the slurry for cement production.

The company which has its offices at 8119-104 St., Edmonton, claims that marl is virtually unused in Canada for cement production.

The mineral has been extensively used in Europe for this purpose and its use in the U. S. in recent years has been increasing.

TO HANDLE PROMOTION

Vickers & Benson Ltd., Toronto-Montreal, has been named to direct advertising and promotion for **American-Standard Products (Canada) Ltd.**, effective Jan. 1, 1958. Agency account supervisor will be A. G. Lawrason.

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Offices, Plants Bright Spot In Building Contract Awards

Total value of construction contract awards for the first nine months of this year were the third highest ever achieved but about 18% off from the same period a year ago.

Figures by Hugh C. MacLean Building Reports show that the cumulative total for construction contract awards for the January-September period this year was $2,196 million, off $488 million from the year before.

Soft spots were residential building and engineering which offset increased activity in the business and industrial building fields.

In September, awards reached $217.9 million, off some $40 million from the same month in 1956. Industrial and engineering scored but there were declines in residential and business building.

Here are the contract award totals by category for the nine-month period:

	Jan.-Sept. 1957 ($ mill)	% ch. fr. 1956
Residential	589.6	—33.7
Business	593.1	..
Industrial	350.6	+2.8
Engineering	662.8	—23.0

Harding Celebrates

Our Carpet Sales Up But Imports Dominate

Carpet sales in Canada are currently running over two and one-half times higher than in the years just before World War II.

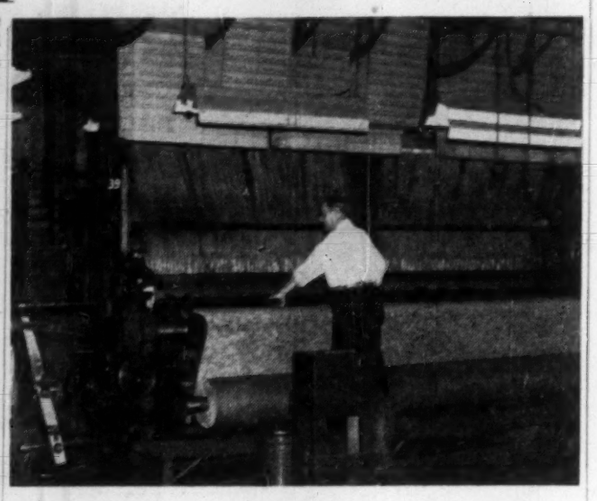
But Canadian carpet makers no longer command the market.

- **On average, Canadian production** filling this greatly increased demand has increased only 10% over 1935-39 levels.
- **Imports, however,** have jumped from 18% of total carpet sales before the war to almost 60% today.

These comparisons were made by C. M. Harding, president of **Harding Carpets Ltd.** at ceremonies marking the Brantford, Ont. company's 30th year of operations.

Competition problems facing the carpet industry in Canada are part of the over-all difficulties which beset the textile industry as a whole.

Demand for textiles is at a record high. Yet despite efforts to maintain production standards and merchandise Canadian products, most of the increased demand is being taken up by imported materials.



CARPETING rolls off non-stop machine.

Low Costs

Foreign fabrics have the advantage of relatively low cost and a Canadian tariff structure which gives inadequate protection to the Canadian industry, Mr. Harding states.

Employment trends in the industry reflect the impact of competition from abroad:

- **In the Canadian wool textile** industry about 17,650 people were employed in 1950, today about 13,870. This is the part of the textile industry which once used wool exclusively, still does use it to some extent.
- **Primary textile industry** employment as a whole has dropped from 98,000 to 81,000 in the same period.

Canadian textile makers are looking for some help from Ottawa in the near future. The government has instructed the Tariff Board to inquire into the textile industry and every tariff item relating to it. (**FP**, Sept. 28.)

Many expectations of Canadian textile makers are based on the recommendations of the Gordon Commission which investigated Canada's economic prospects over the next quarter century.

The commission report recommended a "realistic appraisal of our present tariff structure and customs regulations." In addition, a special report prepared for the commission by the National Industrial Conference Board indicated the benefits which would come to the Canadian textile industry and to Canada as a whole from such a reappraisal.

Within the wool textile industry — as in other sectors of the textile industry—Canadian manufacturers are making efforts to meet the competitive situation.

New Machinery

Some $3 million will be spent by the wool textile companies in 1957 on new construction and machinery. This will bring the postwar total to $45.6 million.

Industry officials point out that only one-fifth of all capital spending in the past 12 years has gone into new buildings. Remainder has been spent on new machinery and on modernization — important factors in a drive to regain markets.

Harding Carpets has been spending heavily on new equipment, on plant renovation. Outlays in the past two years have reached almost $700,000 bringing the total of the past 10 years to over $2 million.

Yardage produced in its Brantford mill has kept pace with market growth, unlike the trend in the national picture where the increase in Canadian production has been minimal.

However, larger output by Harding Carpets reflects, in part, acquisition of **Guelph Carpet & Worsted Spinning Mills.** Without counting its addition to sales, company's output is running approximately one and one-half times larger than in 1939. "Harding Carpets' net profit varied from $267 in 1933 to $104,677 in 1939. In 1956, net profit was $130,110, which includes the net earnings of **Guelph Yarns Ltd.** (until 1950 Guelph Carpet & Worsted Spinning Mills Ltd.)

1953 Best Year

Company's best year was 1953 when consolidated net profit amounted to $548,561, which included $111,215 income tax recoverable.

In 1956 consolidated accounts, earnings per share on the 234,654 shares outstanding came to 55c. This compares with earnings per share of 61c in 1939 on the then-outstanding 172,513 shares of Harding Carpets before acquisition of Guelph Yarns.

Consolidated net profit of Harding Carpets for six months ending Apr. 30, 1957, was $73,763 or 31c per share vs. $172,670 or 74c per share a year earlier. This decline reflects, in part, the effects of a strike and heavy start-up expenses after the strike, say company officials.

Company now operates two divisions: yarns are produced at its Guelph plant; preparatory weaving and finishing operations are carried out in Brantford.

Harding Carpet expenditures in recent years have resulted in: addition of 20,000 sq. ft. and conversion of warehouse space into manufacturing space; installation of large freight elevator; addition of a 15 ft. Wilton loom; purchase of a 15 ft. shear and steamer; addition of tapestry looms; replacement of carding equipment and spinning frames with ones of more modern design; expansion of laboratory facilities.

The Cream Of Carpets?

Carpets made of milk?

You won't be walking on them in 1957 — but you may be a few years from now.

Use of a new fibre made from milk is being examined by development managers at **Harding Carpets Ltd.**, Brantford, Ont.

A pale green, soft-textured carpet made from these milk fibres is currently running a gamut of harsh tests:

—It's being blasted with 105 deg. heat.

—It's being "faded by tropical sun over a period of years."

—An abrasive wheel is being run over it, giving it years of footwear in a matter of hours.

Outcome of these and other tests will determine whether or not Canadians will be buying milk fibre carpets.

Extend Program To 55 Wells At Wainwright

Wainwright Producers & Refiners, jointly with its parent company, **American Northland Oil,** has completed two further wells in the Wainwright Field during September, Murray A. Schutz, executive vice-president, reports.

"With the completion of these two wells, the company has now extended its successful drilling program in Wainwright to 55 wells during the last 27 months, with only one dry hole," Mr. Schutz said.

Higher Oil Quota Is Seen Favoring Canadian Oil

Two U. S. midwest oil companies who have successfully appealed against the recent U. S. government-prescribed oil import program are important importers of Canadian crude oil.

The favorable government decision is seen an important boost for Canadian oil exports.

Northwestern Refining Co., St. Paul, Minn. was originally given an import quota of 10,000 b/d (all of this would be Canadian oil mostly from Saskatchewan).

But Northwestern appealed for an increased quota to 13,500 b/d. The U. S. Interior Dept., hearing the recent appeals, has now granted Northwestern what it asked for.

International Refineries, Inc. Wrenshall, Minn., on the other hand, only received part of what it asked for. Its original quota was 10,900 b/d and the company asked for a boost of 15,000 b/d.

Washington has awarded only about half of this extra to 12,250 b/d.

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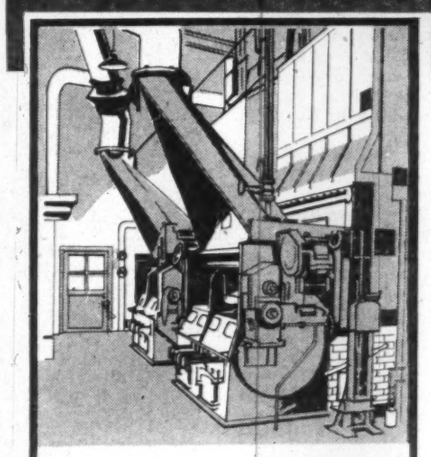

Plant Engineer checked Victory Mills' figures at right.

"The figures given in this advertisement have been checked by our plant engineer, Mr. Max Jackson, and are certified to be correct."

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Today a modern 50,000 lb. per hour, stoker-fired boiler provides 80% of all steam used: when the change-over to coal is completed the savings will be $110,000.00 per year in comparison to using oil or gas. The continuous discharge spreader-stoker with dust collector, economizer and other auxiliary equipment not only cuts labour costs but simplifies coal and ash-handling plus eliminating smoke and dust problems.

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For further information or additional case histories showing how other plants have saved money burning coal the modern way, write to Bituminous Coal Institute of Canada at 32 Front Street West, Toronto.

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Ike's Reciprocal Trade Act Backing May Set Off Battle

(Special Correspondence)

WASHINGTON, D.C.—President Eisenhower has swallowed hard and taken the plunge.

He has come out for extension of the Reciprocal Trade Agreements Act, the heart of U. S. foreign trade policy.

His long-awaited and expected request for extension of the law signals the beginning of what may become the greatest protectionist battle ever seen on Capitol Hill.

The protectionists have at least a 50-50 chance of killing the law during the 1958 session of Congress. They have been preparing for more than a year for the onslaught.

And Washington well remembers the warning by Senate Finance Committee Chairman Senator Harry Byrd when the law was renewed in 1955 when he said the Reciprocal Trade Agreements Act would never be renewed again.

Byrd is the key man in the picture since his committee has the power of life or death over the measure.

What will happen if the law is beaten? No one likes to talk about it here. At first there might not be too much change.

Soon, however, the protectionists would capitalize on their efforts and try to kill off any *ad hoc* link with GATT, slap on a tariff schedule that would make Messrs. Smoot and Hawley look like pikers.

The president has provided a glimpse at what his strategy will be in 1958 to try to defeat the protectionists.

Ask for Power

He's going to ask for more tariff-cutting powers and it's reported he might ask for five year extension of the Reciprocal Trade Agreements Act instead of three as in recent years.

He may wrap the Organization for Trade Co-operation (OTC) in the same package along with revision of the anti-dumping act and an improvement in the customs administrative act.

There are indications, however, that this would not be a "take it or leave it" package.

He might be willing to forget about OTC — two times ignored by Congress — in exchange for an okay on RTAA.

There also is a report that the president may ask for Congressional authority to cut tariffs by 15% over a certain number of years.

This is what he asked for and got in 1955, after a narrow squeak through Congress.

On the last renewal, however, Mr. Eisenhower had to agree to a crippling amendment tacked onto the law which opened a few more doors to protectionists by authorizing restrictions on imports for defense essentiality reasons.

In a formal statement, here's what the White House has to say:

"The trade agreements program is designed to contribute to the development of mutually beneficial international trade.

"In so doing it plays an important role in the achievement of our foreign economic policy objectives.

"Experience with the program since 1934 demonstrates this conclusively.

"The executive branch strongly favors continuation of the trade agreements program including the extension of the Trade Agreements Act.

"The life of the program should be extended by Congress for a sufficient period to provide the essential stability to the program and adequate authority to vouchsafe and expand the gains that have been made in world trade."

Prestige Win

One thing which helped to squeeze Congressional approval for RTAA in 1955 was the enormous prestige of President Eisenhower.

In 1958 there will be little or no Eisenhower prestige with which to sway Congress.

Ike's coat tails are no good to politicians running in 1958 or in 1960 and, in fact, in some areas he has become a political liability.

Hence the Administration will have at least one strike against it before it even gets up to bat in the Capitol Hill trade battle of 1958.

Here is a rundown of the trade measures Mr. Eisenhower is now pushing:

- **Extension of the Trade Agreements Act.**

Enacted in 1934, this basic law of the Reciprocal Trade Program was renewed in 1955 and expires again next June 30. This legislation will be the focal point of all Congressional debate on the trade program.

The lapse of the program would remove the president's tariff negotiating authority and might eventually return tariff making to log-rolling tactics in Congress.

It is under the general delegation of authority contained in this act that the president made the U. S. a contracting party to the General Agreement on Tariffs and Trade, although the GATT agreement itself was never submitted to Congress for approval.

- **U. S. membership in OTC.**

The Administration for the second time last spring submitted a proposal for U. S. membership in OTC. If formed, OTC would be the administrative arm of GATT.

This has been considered a key measure in demonstrating U. S. support of GATT.

Failure of the measure to get through two years running despite presidential pleas, reflects the growth of protectionist influence.

- **Revision of the Anti-Dumping Act.**

In the closing days of the last session of the House it passed, with a number of amendments, a treasury department proposal for revision of this 1921 act.

Previous hearings by the House Ways and Means Committee showed clearly that there was much disagreement on how it should be brought up to date.

While the liberal trade interests favored provisions which would assure that the scope of the act be limited to clear cases of deliberate dumping, protectionists urged expansion of its scope to an extent that would make it a vehicle for dodging the Trade Agreements Act in order to restrict legitimate imports.

The bill passed by the House contains mostly technical amendments proposed by the treasury department, but does not resolve the basic policy issues.

The Ways and Means Committee report pointed out that these issues require more time for thought and indicated it might consider further work on the act in 1958.

The next step for the present bill is consideration by the Senate Finance Committee to which it was referred before adjournment in August.

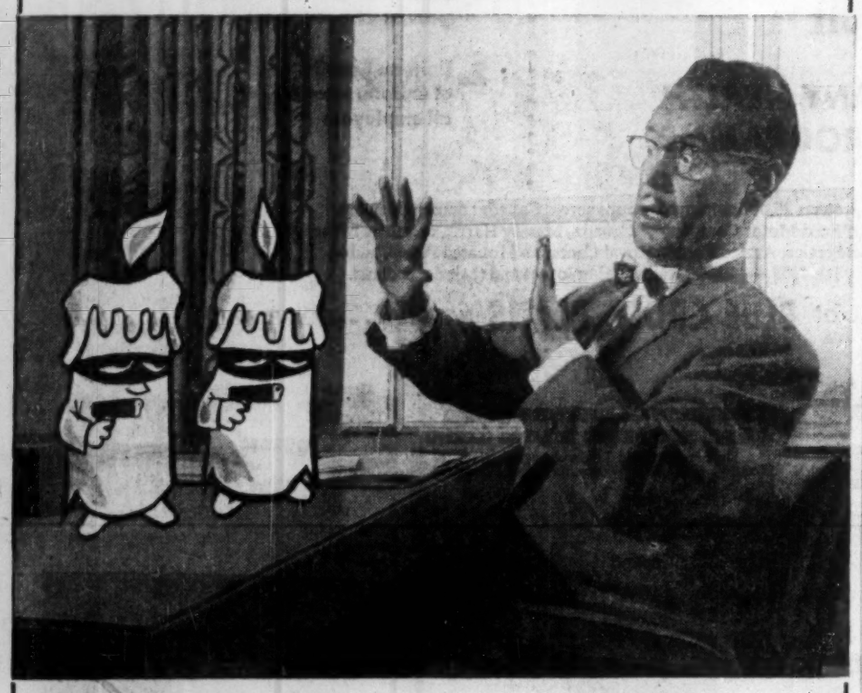
- **Customs Administrative Act.**

This is a new customs reform bill introduced at the request of the Administration by the House Ways and Means Committee Chairman Jere Cooper, a Democratic Representative from Tennessee and ranking New York Republican Donald A. Reed. The bill would revise the long list of commodity classifications in the tariff schedule.

The present schedule, established by the Tariff Act of 1930 has vague and ambiguous definitions. It also needs revision to include many products unknown in 1930.

The classification of an import is a key step in determining the applicable tariff.

Plant Manager robbed by LAZY LUMENS



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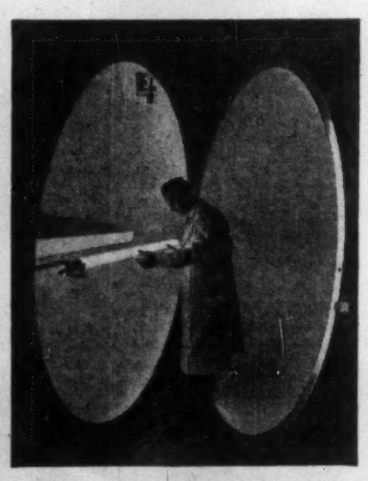

This "over-sized compact" is, in fact, an *Integrating Photometer*. It registers the total lumen output of G-E Fluorescent Lamps—one of many stringent tests that ensure a quality product.

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CANADIAN GENERAL ELECTRIC COMPANY LIMITED

Company Report

To assist readers in appraising and comparing company financial statements, The Financial Post has a uniform method of presenting corporation accounts. Variations from the companies' published reports are footnoted.

Steel

HAYES STEEL PRODUCTS LTD., Merritton, Ont., consolidated net profit of $25,080 for year ended July 31, 1957, compared with previous year's $295,585.

Rearrangement of plant has been substantially completed and should result in more efficient future operation, says President J. E. Martin. Expenses in this program resulted in lower earnings.

O. & W. McVean Ltd., a wholly-owned subsidiary engaged in the manufacture of wood products at Dresden, Ont., had a major fire in January which destroyed a large part of the buildings, machinery and inventories.

In view of the operating results of this subsidiary in recent years and declining sales demand for types of wood products manufactured, operations at Dresden will be discontinued and company liquidated.

A profit of $145,095 was realized from fire insurance settlement and sale of remaining assets and business.

A contributory employees' pension plan was initiated.

Options may be granted employees to purchase 10,000 shares at 95% of the fair market value. At July 31, 1957, options were taken up on 9,700 shares at $30.64 per share.

CONS. INCOME ACCOUNT

Years Ended July 31:	1957	1956
Net earnings	433,897	$914,688
Less: Depreciation	408,817	483,003
Income tax		136,100
Net profit	25,080	295,585
Less: Dividend	210,000	210,000
Surplus for year	‡184,920	85,585

‡Deficit.

Note—Co. shows net profit of $315,284 including $19,690 profit on disposal of f.a. (14c per com. sh.) in 1956 and a net profit of $116,925 in 1957, including $91,845 profit on disposal of f.a. (66c per sh.)

Note—Depreciation provided on straight line basis for year ended Jul. 31, 1957. If diminishing balance basis had been continued as in previous years, net profit would have been reduced by approx. $62,000.

Earnings per Share and Dividend Record:		
Common	$0.18	$2.11
Paid†	1.50	1.50

†Paid November

Shs. o/s at July 31:		
Common, n.p.v.	140,000	140,000

CONDENSED CONS. BALANCE SHEET As at July 31:	1957	1956
Cash	$630,556	$338,556
Accts. rec. less res.	973,623	1,540,531
Inventories	4,112,596	4,216,074
Total curr. assets	5,716,775	6,095,161
Misc. assets	111,389	175,282
Investments	287,445	252,902
Fixed assets†	3,130,926	3,119,282
Total assets	9,246,535	9,641,727
Accts. pay.	917,469	1,287,435
Taxes pay.	7,127	84,373
Total curr. liab.	924,596	1,371,808
Res. for inc. tax	97,000	97,000
Capital stock	1,656,608	1,656,608
Capital surplus	615,425	615,425
Earned surplus	5,952,906	5,900,886
†After depr. of	4,975,693	5,712,418
Working capital	4,792,179	4,723,353

Mr. Employer

here's how.

PIGOTT

develops

SKILLED WORKERS

For the past three years Pigott Construction Company Ltd. has been using International Correspondence Schools to supplement management training. Permanent employees from Montreal, Toronto, and Hamilton enroll in a management training program developed by the company in co-operation with I.C.S.

Y. E. Anderson, left, Field Superintendent I.C.S., receives list of current Pigott enrollees on the Queen Elizabeth Hotel job, Montreal

Pigott is one of more than 300 Canadian companies using the I.C.S. method of developing skilled workers. Others on the list include: Dominion Bridge Company, Limited; Dosco; Dominion Textile Company, Limited; Aluminum Company of Canada, Limited; Algoma Steel Corporation, Limited; Abitibi Power and Paper Company, Limited; Trans-Canada Air Lines; Bowaters Newfoundland Pulp and Paper Mills, Limited; Quebec Hydro Electric Commission; Saskatchewan Power Corporation.

I. C. S. CAN HELP TRAIN YOUR WORKERS TOO!

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- I.C.S. can do the training alone or in combination with other techniques.
- I.C.S. Training gives quick results. The fast worker is not held back by lagging classmates.

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CO-OPERATIVE TRAINING DIVISION

INTERNATIONAL CORRESPONDENCE SCHOOLS CANADIAN, LIMITED

Dept. F-13-57, 7475 Sherbrooke Street West, Montreal

Used Code Name 'Susie' As Shares Sold Illegally

Use of code name — Susie — and links with **Gregory & Co., Inc.**, which had its registration cancelled late in 1956 by the Quebec Securities Commission are reported in a decision by O. E. Lennox, chairman, Ontario Securities Commission.

Mr. Lennox reports sales of shares not qualified for distribution by two men who were not registered with the commission.

He orders that all exemptions under the Ontario Securities Act are to be denied Kenneth H. Gregory, Gregory & Co., John Charles Stone and William P. McGirr.

Here is the text of his decision published in the September OSC bulletin.

Kenneth H. Gregory, Gregory & Company, Inc., John Charles Stone, William P. McGirr, Zenith Mines, Dupont Mining Corp., Apollo Mineral Developers, Cameron Copper Mines.

The Commission received enquiries which indicated that certain mining issues were being sold from Ontario into the United States, following solicitations over the long distance telephone by non-registrants offering securities which were not qualified for sale by the Commission.

After preliminary enquiries had located the source of these telephone calls, a search warrant was obtained and premises in Etobicoke Township were raided.

On the strength of the material seized as a result, and the information obtained during the preliminary investigation, an Investigation Order was issued pursuant to the provisions of Section 23 of The Securities Act.

During his examination under oath Stone made several admissions, establishing that he had sold shares in unqualified issues and had traded without registration on behalf of an unregistered principal.

McGirr disappeared before he could be subpoenaed: however, Stone's evidence, supported as it is by documentary evidence now in the possession of the Commission, definitely involves McGirr as well.

From the outset everything pointed to Gregory & Co., Inc. of Montreal (controlled by Kenneth H. Gregory) as the engineers behind this illegal distribution. The registration of Gregory & Co. was cancelled by the Quebec Securities Commission on Dec. 6, 1956 resulting in litigation which has not, as yet, been concluded.

Stone was extremely evasive respecting any questions which might involve Gregory; in fact, he appeared to be far more intent upon protecting the interest of his mysterious employer than his own interest.

Without laboring the details of his evasive evidence and documentary evidence, certain parts of Stone's evidence should be accepted as conclusive against Gregory, despite the efforts which were made to shroud the entire operation in mystery.

For instance, there would obviously be no point in selling securities by telephone unless the purchasers were advised to whom payments were to be made. Stone admitted that people were advised to make payments to Gregory & Co.

Furthermore, despite the devious methods employed as, for instance, the use of a code—reports being made by telephone to, and instructions being received by telephone from "Susie" in Montreal — selling commissions being paid on street corners by an individual known only by his Christian name—Stone, nevertheless, was able to identify his employer as he visited Gregory in Montreal twice following the raid. On his second visit he received a payment in cash directly from Kenneth H. Gregory.

No useful purpose can be served by itemizing the documentary evidence found on the premises, including promotional literature issued by Gregory & Co. and Gregory's Selected Securities; handwritten sales "pitches" and work cards similar to those used by promotional houses (Stone is an ex-securities salesman).

Both Stone and McGirr evidently realized at the time of the raid that this formidable evidence required some explanation and, accordingly, referred to a sub-tenant by the name of "Meredith" concerning whom they could offer no further information. Stone later admitted, under oath, that any reference to "Meredith" was pure fabrication.

The investigation further disclosed that certain cheques deposited to Gregory's bank account were received from persons contacted by long distance telephone during this extensive selling campaign.

On the strength of the evidence over-all I find as a fact that Gregory & Co., Kenneth H. Gregory, John Charles Stone and William P. McGirr have traded in securities within the meaning of the Ontario Securities Act without registration, and have also traded in securities not qualified for sale within the meaning of the said Act. A ruling will be made pursuant to the provisions of Section 19 (3) that the exemptions as provided by sub-sections (1) and (2) of Section 19 will not apply to the said Gregory & Co., Kenneth H. Gregory, John Charles Stone and William P. McGirr.

This is admittedly the most drastic order of its type ever issued by the Commission. In my opinion, it is fully warranted when dealing with the conduct of individuals who have furmerly enjoyed the privilege of registration in Canada and a third party, who not only participated in the illegal selling campaign, but also provided the premises and telephone facilities for the purpose.

Canadian Named V-P AA de Mexico

Walter G. Conrad, a native of Canada, has been elected vice-president and general manager of **American Airlines de Mexico, S.A.**

Mr. Conrad, a Spitfire pilot with the Royal Canadian Air Force between 1940 and 1945, earned the DFC; later joined **American Airlines** as Canadian sales manager at Toronto.

He became European sales manager in London, and was sales manager at Baltimore, before moving to Mexico City, June 1956.

He has been director of sales for AA de Mexico, for over a year. He succeeds F. J. Mullins, who has been named assistant regional operations officer, for American Airlines' Western Region in Los Angeles.

Bank Staff Changes

Royal:

A. W. CHISHOLM, assistant accountant, St. Catherine & St. Alexander, Montreal, Que., to be accountant, St. Lawrence & Ontario, Montreal.

J. B. FULTON, assistant accountant, Saskatoon, Sask., to be accountant, Moose Jaw, Sask.

J. J. JOBLONKAY, to be assistant accountant, Saskatoon, Sask.

A. ZEGARRA, acting manager, Mayaguez, to be manager, Mayaguez, P.R.

J. A. B. CACERES, accountant, Havana, Vedado, 23rd & P. Sts., to be manager, Regla, Cuba.

R. S. REYES, Maracaibo, Venezuela, promoted to assistant manager.

M. L. J. FONT, assistant accountant, Havana, Avenida de Italia, to be accountant, Havana, Vedado, 23rd & P. Sts., Cuba.

• • •

Nova Scotia:

C. A. RAFUSE, mgr., Grand Bank, Nfld., to be mgr., Liverpool, N.S.

J. H. RECTOR, mgr., Rideau & William, Ottawa, to be mgr., Fredericton, N.B.

L. M. FARTHING, to be asst. mgr., Edmonton, Alta.

R. W. GALLAGHER, asst. mgr., Lethbridge, to be asst. mgr., Regina, Sask.

A. W. LYNCH, to be accountant, Kensington, P.E.I.

J. A. McGEE, to be accountant, Alexandria, Ont.

D. B. PATERSON, to be accountant, St. James, Man.

E. P. SAULNIER, to be accountant, Cote des Neiges & Appleton, Montreal.

J. F. WRIGHT, assistant accountant, Edmonton, to be accountant, Edmonton.

G. A. EDGE, accountant, St. James, to be an assistant accountant, Edmonton.

There's Money in Yule Trees Here's How You Get Started

There's "big" money in trees.

So says J. K. Reynolds, Lake Erie district forester, who reports that growing Christmas trees for sale has become profitable for many Ontario residents.

• **Recreation-minded hobbyists** find that tree planting pays off nicely in dollars.

• Tree connoisseurs, not satisfied with species on the general market, strive for "perfect" Christmas trees of their own.

• Others enter the field as small business men bent on producing stock for sale.

The first step in tree farming is a good seed. In this do-it-yourself age, most collect their own. The almost universal choice of species: Scotch pine.

The seed, Mr. Reynolds advises, should be collected from trees that have all the characteristics of a good Christmas tree — color, branch angle, needle length, etc.

Best time for collecting cones is mid-October and November. To extract the seeds the cones should be placed near heat (on top of your furnace is ideal). The average yield should be eight ounces of seed per bushel of cones.

The ideal land for seed beds is a light sandy loam of fairly high fertility, which should be fall and spring plowed. Beds, usually 44 in. wide and 30 ft. long, are raised about four in. above ground level, raked smooth and then rolled.

The seed is then hand broadcasted on the beds at the rate of three oz. per unit bed. This should produce about 6,000 trees per bed at two years.

The beds are rolled again and covered with about one-eighth inch of white sand subsoil. Then a four in. layer of clean rye straw or pine needles should be applied as a mulch.

Next step is the erection of frames for supporting lath screens or shade mats.

As soon as germination is observed in the spring, the needle mulch should be removed. After that it's merely a matter of weeding the seed beds and watering when needed.

The seedlings are left in the bed for two growing seasons after which they are ready for planting in the field.

Chemical Plant Now Operating On West Coast

A big, new $12 million chemical plant for Canada's West Coast is now in operation at West Vancouver, B.C. The chlorine-caustic soda producer of **Hooker Chemicals Ltd.** is the first such plant west of the Canadian Rockies.

The plant has a rated daily capacity to produce 110 tons of 50% and 73% liquid caustic soda, 100 tons of chlorine, and 1 mill. cu. ft. of hydrogen. Hooker plans to build up to full capacity load on a gradual basis.

At capacity, the plant consumes 160 tons a day of bulk salt, and uses 7.2 mil. gal. daily of water.

Principal customers are the pulp and paper industry, using both caustic soda and chlorine; oil refineries using mostly caustic soda; other chemical manufacturers using both caustic and chlorine; plywood adhesive manufacturers using caustic; and municipalities using chlorine for water purification and sewage treatment.

MARKET COMMENT

The informed opinion of men experienced in market analysis is given regularly in this investment feature. For profit add their viewpoint to yours. You get them in

THE FINANCIAL POST

Yearly by mail in Canada $6; elsewhere $7 yearly

ANNOUNCEMENT

FRUEHAUF APPOINTMENT

C. R. TISDALE

R. J. Telford, Vice-President and General Manager of the Fruehauf Trailer Company of Canada Limited, has announced the appointment of Clive R. Tisdale as Advertising and Public Relations Manager. Prior to taking over the newly-formed post in Fruehauf's national expansion programme, Mr. Tisdale had been Advertising Manager for Ford Tractor and Equipment Sales Company of Canada Limited.

For the NATIONAL EMPLOYER

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2. Uniform Benefits at uniform rates for all employees

Blue Cross protects 25,000 employed groups across Canada; among them are employees of Ford Motor Company of Canada, Massey Harris, members of the Federal Civil Service, Armed Forces, Royal Canadian Mounted Police, and—as of January 1st, 1957,—140,000 Railway Employees and their dependents.

CANADIAN COUNCIL OF BLUE CROSS PLANS NATIONAL . . . NON-PROFIT

ALBERTA
Alberta Blue Cross Plan, Edmonton
Joseph A. Monaghan, Executive Director

MANITOBA
Manitoba Hospital Service Association
Winnipeg,
F. D. MacCharles, Executive Director

NEW BRUNSWICK • NEWFOUNDLAND
NOVA SCOTIA • PRINCE EDWARD ISLAND
Maritime Hospital Service Association,
Moncton, N.B., R. C. Wilson, Executive Director

ONTARIO
Ontario Hospital Association
Blue Cross Plan for Hospital Care,
Toronto, D. W. Ogilvie, Director

QUEBEC
Quebec Hospital Service Association
Montreal, E. Duncan Millican, President

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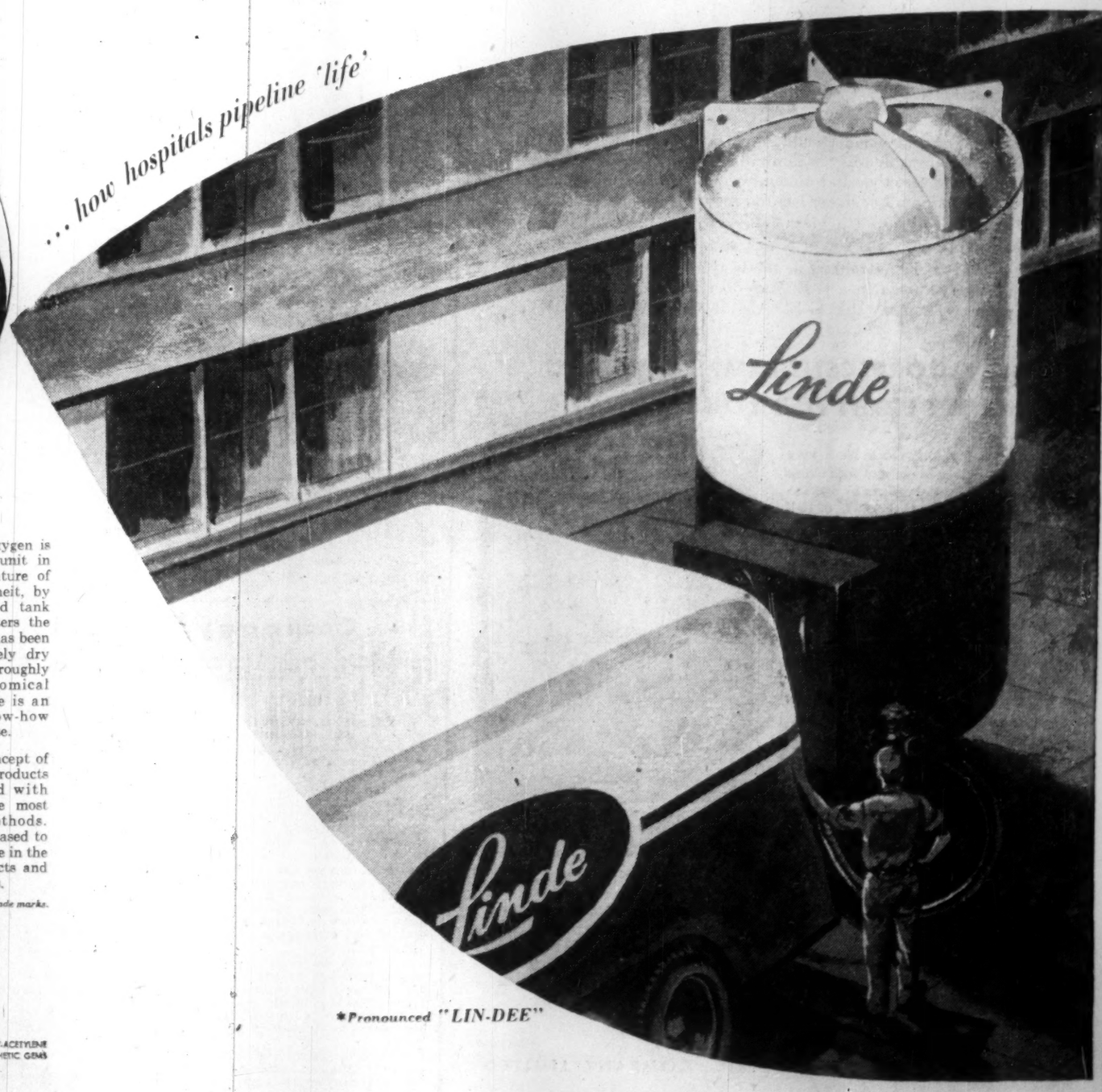
Linde*

... how hospitals pipeline 'life'



Just a few years ago, the only method of administering life-giving oxygen to hospital patients was from heavy, cumbersome cylinders, similar to those used in welding.

Today, as the result of a system developed and pioneered by Linde on this continent, newly-constructed hospitals actually pipe oxygen through their buildings in much the same manner as water. No longer necessary is the time-consuming routine of moving heavy cylinders in and out of hospital rooms. Patients are assured of an immediate and uninterrupted flow of oxygen as and when required. Hospital costs are reduced and general efficiency increased.

The "LINDE" "Driox" storage unit shown here provides an outside reservoir from which a continuous supply of oxygen is piped throughout the entire hospital. Oxygen is delivered to the storage unit in liquid form, at a temperature of minus 298 degrees Fahrenheit, by means of a Linde-designed tank truck. By the time it enters the piping system, the oxygen has been converted into a completely dry gas, thus ensuring a thoroughly safe, practical and economical supply on demand. Here is an example of industrial know-how applied to a life-saving cause.

Linde offers a unique concept of total service: the finest in products and processes combined with intensive research and the most advanced engineering methods. Upon request we will be pleased to provide on-the-job assistance in the application of Linde products and processes to your operations.

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HOME STUDY COURSE IN PROGRAMMING BUSINESS COMPUTERS

A home study course, the first and only one of its type, is being offered by Business Electronics Inc. Designed for people without technical training or experience, it is based on a similar course members of the firm developed and are teaching at a large University. Students are taught to develop and program electronic systems for business problems such as Payroll, Accounts Receivable, Inventory Control, etc.

Free brochures describing the course are available upon request from Business Electronics Inc., Computer Branch, 420 Market Street, San Francisco 11, California.

Ottawa Politicians Keeping Eye on Manitoba Elections

From Our Own Correspondent

WINNIPEG — A Manitoba by-election in Emerson constituency, one of two called by Premier Campbell for Nov. 14, is looming up as a political campaign of much more than local significance.

Apart from its interest in Manitoba it is being watched by Liberals and Conservatives at Ottawa who view it as a test of political trend in this province.

A Liberal victory might not give much of a lead on what will happen in the Manitoba election, sure to come next spring.

A Liberal loss would be a bad one for Premier Campbell and his government.

Earlier, it looked as though the by-elections would have little or no over-all significance.

The other by-election on the same date is in Morden-Manitou, another constituency in southern Manitoba.

It has long been held by Conservatives and normally the Conservative candidate should win handily on Nov. 14.

The government apparently expects he will and so far hasn't made much of an effort to contest it.

Its candidate hasn't yet been nominated but there no doubt will be one in the field.

There have been reports that Howard Winkler, former Liberal member of the House of Commons for Lisgar, who retired in 1953, might run in Morden-Manitou as an Independent Liberal.

If he accepts a nomination which he says he is not likely to do, it will not be as a supporter of Mr. Campbell.

All-Out Campaign

In Emerson the situation is different. Both Liberals and Conservatives are preparing to throw all their forces into the campaign.

The burden of the fight will be on Mr. Campbell and he and his ministers will make their maximum effort to hold it.

Anything but election of a Liberal in Emerson would be a break in a long record.

No other party has represented it since 1915 and the Conservatives haven't even had a candidate since the election of 1932.

Furthermore if the pattern of the vote in the June 10 federal election is followed provincially the seat would still be Liberal.

The provincial constituency of Emerson is part of the federal constituency of Provencher which last June replaced former Liberal Rene Jutras by Conservative Warner Jorgeson.

While most of the riding gave a lead to the Conservative candidate the part of it which is the provincial riding of Emerson gave the Liberal a lead of between 300 and 400.

About 42% of the registered vote is Ukrainian.

Popular Man

The Campbell government has the advantage of a Ukrainian candidate, and well known and highly popular merchant of Ridgeville.

On the other hand, an RCAF war veteran, Frank Caspar, now a farmer in the constituency, who was the official Liberal candidate in the provincial election of 1953, this time is willing to run on the Conservative ticket.

He is standing for the nomination and is likely to get it.

Caspar in 1953 won the Liberal convention over the sitting member John R. Solomon.

Solomon of Ukrainian descent never lived in the constituency but represented it from 1941, in 1949 getting an acclamation.

After his defeat for the nomination in 1953 he entered the field as an Independent Liberal and won by 174 votes.

A third candidate running on the Social Credit ticket got only about 5% of the total vote cast.

The vacancy in the seat which brought on the Nov. 14 by-election was because of Solomon's appointment to the Bench a few weeks before June 10.

Both the Social Credit and the CCF may have candidates but Liberals and Conservatives will be the main contenders in a hard fought election.

The voting will be on the basis of the constituency of Emerson as it was in 1952. A new redistribution has changed its boundaries but it doesn't come into effect until the day after dissolution of the present legislature.

Little Increase In Manitoba Crude Output

From Our Own Correspondent

WINNIPEG — Manitoba crude oil production although running ahead of last year is not showing the spectacular increase of 1956 over 1955.

The yield in August, 539,085 bbls., a daily average of 17,390 for the month, was only 21,000 bbls. above the 518,054 production in August 1956.

Ten new wells were brought in during August to give the province a total of 842 producing wells. Three old ones were abandoned.

By end of the year if continued at the present rate 1957 production will have been slightly more than 6 million bbls.

This was the estimated yield for 1956 which wasn't quite reached. Total production since the first commercial recovery at Aug. 31, 1957 was 16,883,620 bbls.

ANNOUNCEMENT

GM APPOINTMENT

W. E. AUSTIN

E. H. Walker, President of General Motors of Canada, announces the appointment of W. E. Austin as Assistant to the President. Mr. Austin will be concerned with administrative policy and planning.

TAX AGREEMENT

OTTAWA (Staff)—Canada and Belgium have signed agreements to avoid double taxation. The agreements are expected to be ratified by both governments shortly. The agreement, similar to those between Canada and other countries, provides for freedom from taxation of income earned and already taxed in the other country.

U.K. Ford Profits Lead Way To Auto Industry Revival?

From Our Own Correspondent

LONDON, Eng. — Reflecting the recovery in the U. K. motor-car industry, sales revenue and profits of the **Ford Motor Co.** rose sharply in the first six months of 1957. A record year for the company seems likely.

Group sales in the period amounted to $80 million ($217 million), compared with £68 million in the preceding half-year and £78 million in the corresponding period of 1956.

Earnings before tax were £9.2 million, compared with £4.4 million and £5.6 million.

The number of vehicles sold was 166,234, against 142,363 in the second half of 1956 and 178,379 in the first half of that year.

Sales revenue per vehicle and profit margins (the latter particularly) were thus appreciably higher than in the pre-Suez period of 1956.

The tax charge for the first half of 1957 was £4.4 million, against £2.2 million in the preceding half-year and £2.4 million in the first half of last year.

Group net income amounted to £4.9 million, against £2.2 million and £3.4 million.

Stockholders share in the improvement, as the company is raising the half-yearly dividend on the £35 million ordinary stock from 2½% to 3%.

For the year 1956, the half-yearly payment was followed by a final of 5%, the total of 7½% being paid from earnings of 24%.

Ford's £1 shares rose 2s. 6d. to 33s. 6d. in London following the publication of the figures. Market experts are forecasting a total dividend for 1957 of 9% or 10%.

The company states that the recovery from the difficult situation early this year, which resulted primarily from gas rationing, has been maintained since the end of June.

Chairman of Ford Motor, which is controlled by the **Ford Motor Co. (U. S.)**, is Sir Patrick Hennessy.

Also on the board is Sir Hartley Shawcross, Socialist and former U. K. Attorney-General.

SHARE VALUE DROPS

Third Canadian General Investment Trust Ltd., Toronto, unaudited apparent liquidation value per share at the end of the third quarter (Sept. 30) was $6.60 ($7.41 a year earlier).

Auto Production

	Wk. End. Oct. 12	To Date 1957	To Date 1956
Am. Motors:			
Rambler	....	1,792	356
Total cars	....	1,792	*4,419
Chrysler:			
Chrysler	41	3,681	5,044
Desoto	14	40	1,398
Dodge	312	29,759	35,397
Plymouth	297	26,497	30,621
Total cars	492	59,977	72,460
Dodge	55	3,175	5,188
Fargo	47	3,061	4,612
Total trucks	102	6,236	9,800
Cars, trucks	766	66,213	82,260
Ford:			
Edsel	13	†1,941	....
Ford	55	47,317	55,657
Mercury	....	8,231	6,290
Meteor	1	†23,853	26,155
Monarch	....	†7,557	6,703
Total cars	69	†88,899	94,805
Ford	....	14,413	17,074
Mercury	....	5,509	6,816
Meteor dlvy.	....	654	496
Total trucks	69	20,576	24,386
Cars, trucks	672	†109,475	119,191
GM:			
Buick	38	10,871	14,738
Chevrolet	607	59,973	52,992
Oldsmobile	....	10,874	7,968
Pontiac	....	†36,941	33,060
Total cars	645	118,659	108,758
Chevrolet	323	12,569	17,805
GMC	234	8,334	12,560
Pontiac dlvy.	2	569	1,055
Total trucks	559	21,472	31,420
Cars, trucks	1,204	140,131	140,178
International:			
Trucks	171	9,958	12,485
Stude.-Pack.:			
Stude. cars	152	4,318	6,772
All cars	1,530	273,645	287,214
All trucks	832	58,242	78,091
All vehicles	2,366	331,887	365,305
Prev. week	1,594	....	....
Last year	5,781	....	....

*Includes Nash and Hudson cars.
†Revised figures.
Source: Canadian Automobile Chamber of Commerce.

MANAGEMENT CLINIC

The fifth annual fall management clinic sponsored by the Montreal Chapter, Society for the Advancement of Management will be held Nov. 22 in the Queen's Hotel. It will be conducted by Dr. Marvin Mundel, vice-director, management centre, Marquette University, Wisc. The theme: Improving organization and performance of an industrial engineering department.

BRANCH IN CALGARY

Brown, Mitchell & Wright Ltd., advertising agency, has opened a branch in Calgary, incorporating **A. D. Wood Advertising,** with A. D. Wood as manager.

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A businessman's judgment is no better than his information. You can profit from Canada's bustling growth—as other businessmen do — through The Financial Post. Here is Canada's most comprehensive business news service. Every week, The Post helps you gauge the swing of business and investments. It helps you plan with confidence, make sound decisions. In brief, it helps you make more money because it helps you anticipate trends and developments across the nation. Yearly by mail in Canada, $6; elsewhere $7 yearly.

R. L. MOORE
Manager

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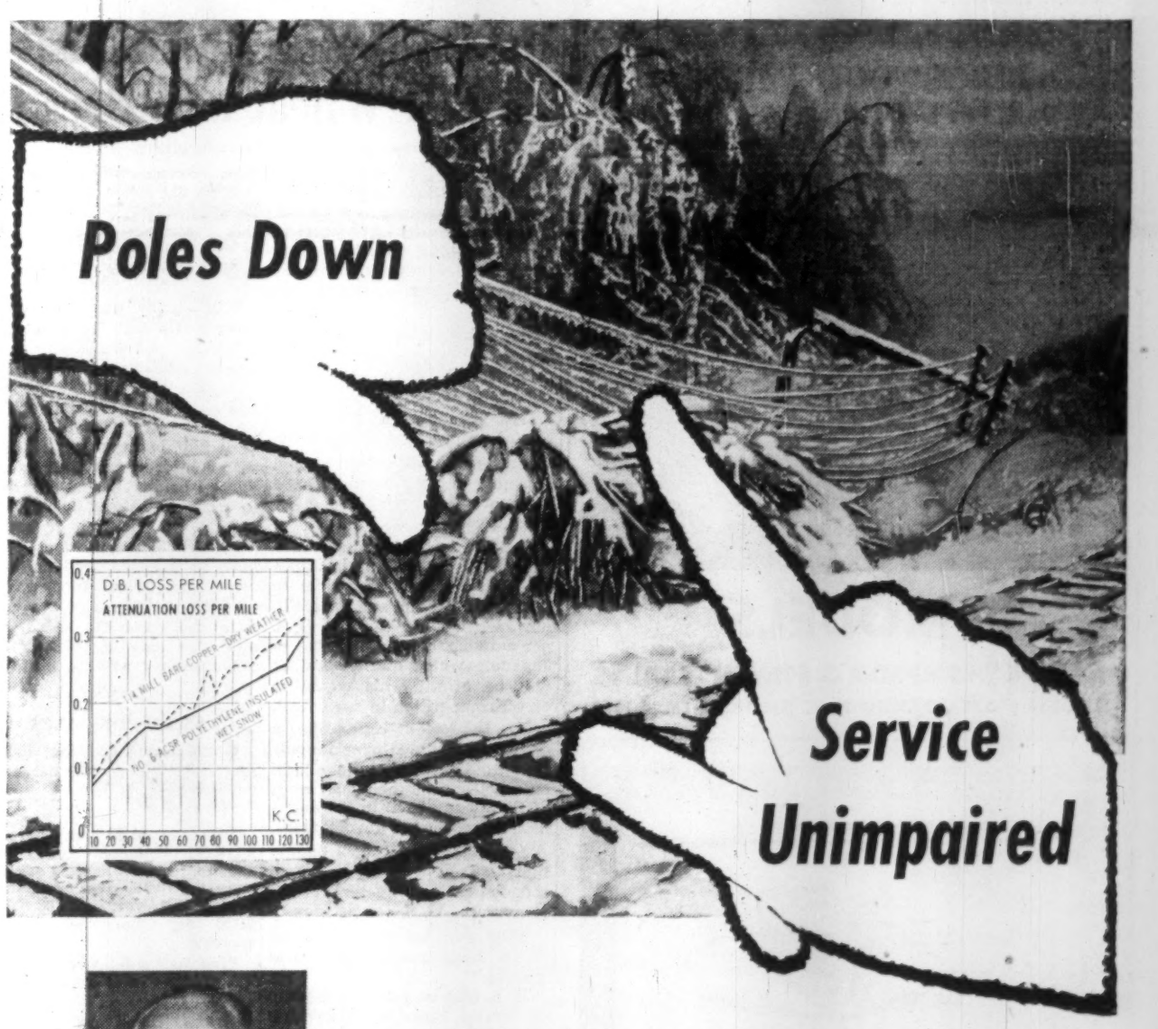

Mr. R. Fullerton, Supervisor of Communications, Northern Alberta Railways, superintended installation and conducted these tests, in conjunction with the Western Wire & Cable Co. Ltd. and Alberta Government Telephones.

Following a severe storm last winter, Northern Alberta Railways found poles and wires down on a 130-mile section from Smith to McLennan, Alberta. Tests were made on Western Wire's A.C.S.R. aluminum steel-reinforced communication cable, coated with "Bakelite" polyethylene. Results showed that "under severe adverse conditions—including wet snow and pole failures—transmission losses were less than with a conventional bare copper circuit on the same route, tested under ideal weather conditions." (See graph)

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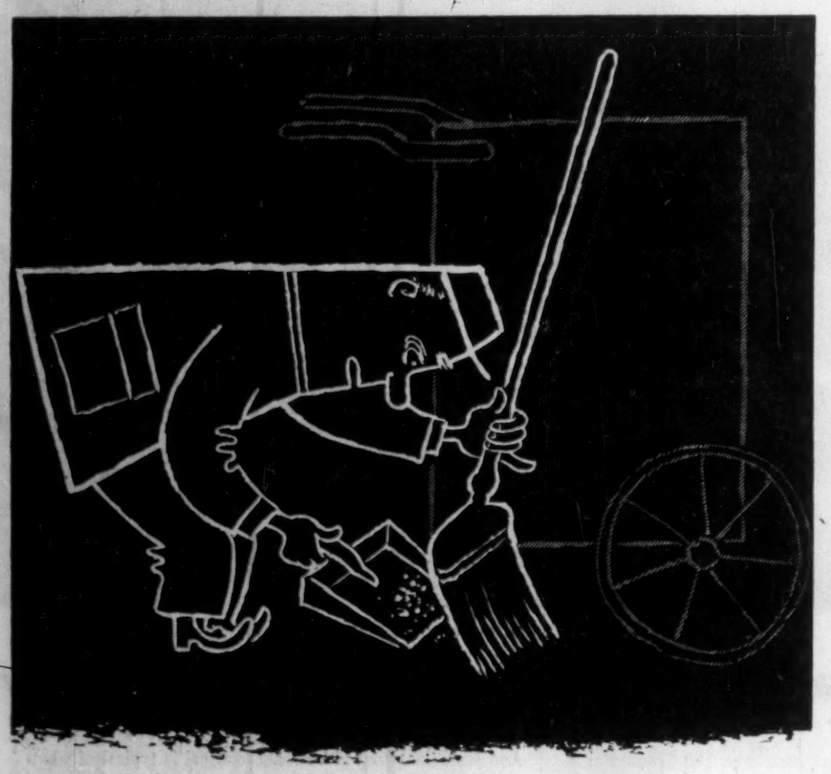

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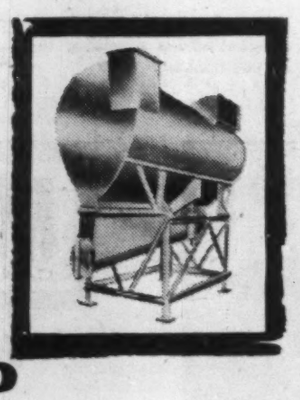

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Canada Forced to Choose Between Lead, Wheat Sales

(Special Correspondence)

WASHINGTON, D.C. — The cards are stacked against us in our economic poker game with the U. S.

It now has become clear that the only reason we may be able to sell more Canadian wheat in the world market is because we will soon be selling a lot less lead and zinc.

This tie-up between lead and zinc and wheat is an intriguing one and the strings attached to it all lead back to Washington.

Last spring the U. S. government tightened the rules on making barter deals for farm surpluses.

It resulted in a sharp cut-back in the number of barter deals Washington had been making in its fire-sale of wheat in the world market.

This, in turn, means we may have a chance to sell more Canadian wheat because we won't be so badly undercut in Europe and the U. K. by so many cut-rate barter deals as U. S. made in recent years.

So, this is fine for our Prairie wheat farmers. But it is not so fine for our lead and zinc producers.

Curtailing of the U. S. barter deals knocked the price props out from under the lead and zinc market.

Washington has been stockpiling lead and zinc, taking a lot of the minerals in exchange for surplus wheat.

This buoyed up the world market and kept prices relatively stable. With U. S. suddenly cutting off this heavy buying for the stockpiles, the bottom fell out of the market.

Prices went down fast and pressure went up just as fast in Washington for protection for the domestic lead and zinc industry.

This protectionist pressure almost resulted in exceedingly high tariff rates being slapped on at the last session of Congress.

It was only prevented by a squabble among the lead and zinc people as to how high the rate should be.

President Eisenhower was even willing to reverse his traditional liberal trade policy and recommend a higher tariff.

There is no question now, however, that the Tariff Commission, which is presently considering the case, will recommend a higher tariff and/or quotas and that President Eisenhower will give his blessing.

The Canadian ministers who came to Washington last week were made painfully aware of this lead and zinc-wheat tie-up by their U. S. colleagues.

In greatly restrained language, the official communique made it clear that we will see higher lead and zinc tariffs before long: "The Canadian ministers expressed concern over the effect on Canadian producers which would result from any future action by the U. S. to raise duties on imported lead and zinc.

"The U. S. members explained the situation confronting their domestic producers.

"They called attention to the continuing need for imports of certain minerals and metals and indicated that any U. S. tariff action that might be taken to relieve serious injury to U. S. producers would have the primary objective of maintaining a normal relationship between imports and domestic production. . ."

Until recently, there had been a squabble within the U. S. Administration on the curtailment of the barter deals.

The Agriculture Department was convinced that it could make dollar sales instead of barter deals and Mr. Benson prefers dollars to bartered lead and zinc or other strategic minerals.

The Interior Department recognized what would happen to the lead and zinc market if the barter was curtailed. It protested against the action.

Interior had been pressured by western senators and the minerals lobby to ask for an expansion, not a contraction, of the barter deals.

When Mr. Benson won out, however, the minerals lobby, western senators and Interior Department switched positions and demanded protection from imports.

One Canadian official commented here this week: "We haven't a chance in this thing. The only reason we were able to sell our lead and zinc was because we couldn't sell our wheat. Now, the only reason we may be able to sell more wheat is because we can't sell our lead and zinc."

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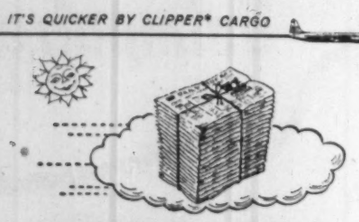

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Benson Plans Japan Visit To Sell Wheat and Bread

(Special Correspondence)

WASHINGTON, D.C. — U. S. Agriculture Secretary Benson becomes a traveling salesman in a couple of weeks as he personally peddles U. S. wheat in a number of countries, some of them good Canadian wheat customers.

Mr. Benson's major stop will be Japan where Canada has been developing a big wheat market in recent years.

Last year we sent 70 million bu. of wheat to the Japanese.

Mr. Benson will encourage the Japanese to eat more bread and use more U. S. wheat to make their bread.

Canada, up to now, has benefited from the shifting of Japanese appetites from rice to bread. Mr. Benson and his aides, however, would like to see U. S. get a much bigger slice of the Japanese wheat market and he will be offering his wheat in direct competition to our wheat.

Mr. Benson, of course, has a distinct advantage over Canada in that he can offer to take local currencies, and then loan most of the money back to the Japanese for economic development.

Japanese officials are hoping that Canada will be forced to offer wheat on long-term credit to meet the U. S. competition.

They want our wheat because of its high quality for bread making.

U. S. may be getting the jump on Ottawa, however. Tokyo has asked Washington to okay a foreign currency deal which would give Japan $47 million worth of farm surpluses—mostly wheat.

Mr. Benson will further this deal on his forthcoming visit to Tokyo.

The U. S. has a few million dollars to promote consumption of its wheat in Japan.

This money was obtained in other deals and Washington is using the yen accumulated for wheat promotion by staging elaborate trade fairs, helping to run a school lunch program featuring bread and milk for almost half of Japan's 19 million schoolchildren, running an advanced bakers' school in Tokyo to train 40 bakers every three months, a nutrition education campaign showing housewives how to prepare well-balanced meals using wheat foods and an advertising campaign, working with the Japanese bread, wet and dry noodle, biscuit and macaroni associations.

GRAND UNION SALES UP

Grand Union Co., East Patterson, N.J., had record net profit of $2,765,982 in the six months ended Aug. 31.

Equal to $1.25 per share on 2,118,171 common shares outstanding, the six months earnings were up 19.8% over comparable period last year ($2,308,405 or $1.13 per share on 1,929,507 shares).

First half sales were $207,351,911 ($181,143,406) an increase of 14.5%.

Grand Union is parent of **Grand Union - Carroll's** which operates 37 supermarkets in Ontario.

Travel Briefs

Winter sports enthusiasts are being offered a number of package tours to Quebec City and Lac Beauport by **Canadian Pacific Railway Co.**

The tours, which cover three-day, seven-day or 10-day visits, go into effect Jan. 1, 1958.

Prices start at $54.75, $124.25, $172 and include accommodation, breakfast and dinner at the **Chateau Frontenac** hotel, transportation from station to hotel, use of Alpin lift at Lac Beauport, ski instruction, lunch close to ski hills, use of Chateau Frontenac's skating rink and toboggan slide.

* * *

West Germany's vast network of highways is to be considerably expanded to meet increased traffic needs. A ten-year plan calls for an additional 7,500 miles of roads in the Federal Republic by 1967, including 2,800 miles of autobahn—Germany's version of speed-ways.

Experts predict that these additions will be sufficient to meet all motoring requirements for the 20 years following 1967, and that the road system will then be able to take two to three times the present traffic.

A "cruise within a cruise," is special feature of a winter Mediterranean cruise by **Greek Line's** flagship Olympia. In addition to calls at 25 major European and North African ports, cruise members will be taken on an inter-island steamer tour of the Cyclades Islands — delightful, off-the-beaten-path Greek isles.

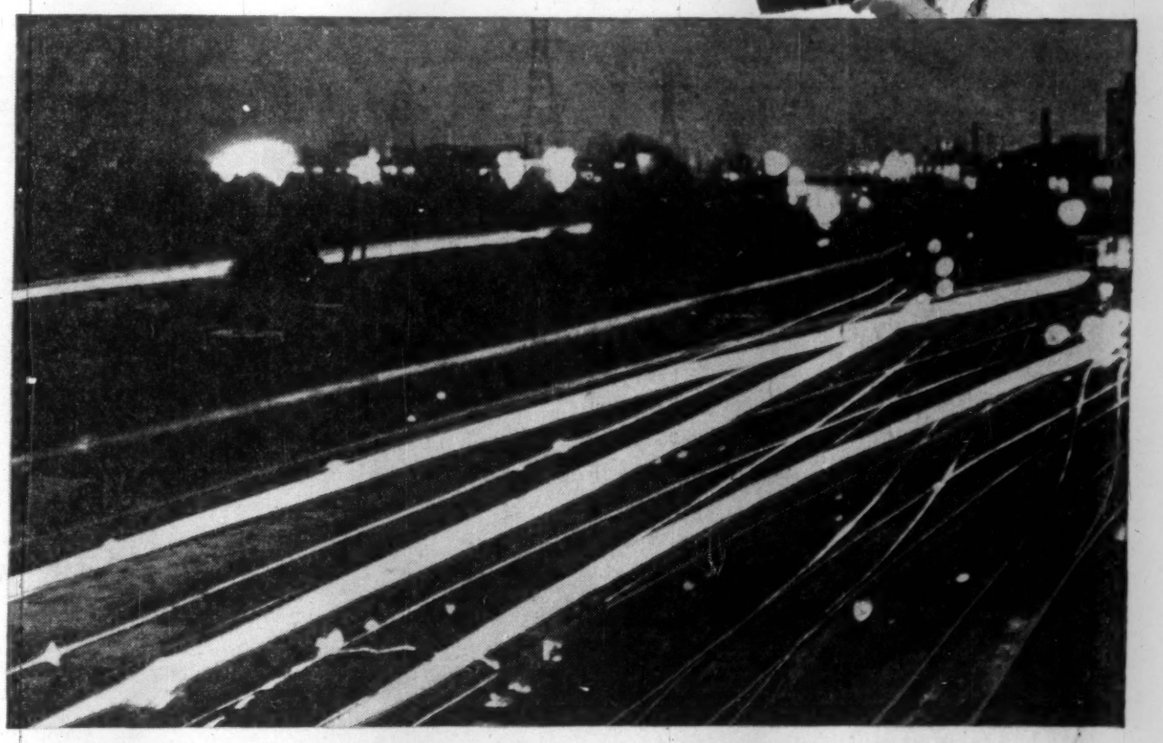
Favorite haunt of European royalty in centuries past, the islands have just recently been "discovered" by modern globe trotters.

* * *

Two new Mediterranean cruises are being offered by **American Export Lines** for the 1957-58 season. In addition to the 12 Sunlane cruises and 48 sea-air trips previously announced, SS Independence will sail from New York Feb. 12, for 22 days, making five stops in four countries. Like other Sunlane cruises, first class, cabin and tourist class accommodation is available at a wide range of prices.

A de luxe, 37-day Independence cruise, limited to 500 first class passengers will start at New York March 8. Stops will be made at 13 ports in seven countries, and interesting side trips have been arranged. Fares start at $975.

"The riding lights and blinking signals of a railway yard made a pattern of dazzle and darkness."—JOHN deVISSER



It's *good* that we don't all see things the same way

For example, Charles Dickens once described Toronto as a city "full of life and motion". But others call it "Hog Town". Some say it's a crowded city — a far too busy city — a city to live out of, not to live in.

But one young Netherlander — John deVisser — sees Toronto as a buoyant city, swirling with life and glitter. He vividly portrays this Canadian metropolis in a series of twenty-four extraordinary color pictures in the current issue of Maclean's

Probably your "picture" of Toronto is very different from how this one man sees the city. But here is something to compare your ideas . . . to start you thinking.

And journalism that is fresh and original is typical of what over two million readers* find in every issue of Maclean's. Maclean's presents a constant change of mood for its readers. One page may be gentle relaxed reading . . . the next may be a controversial view on a subject bound to start discussions.

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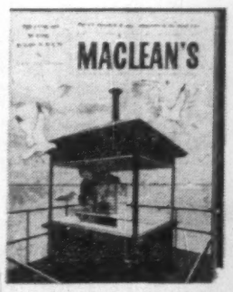

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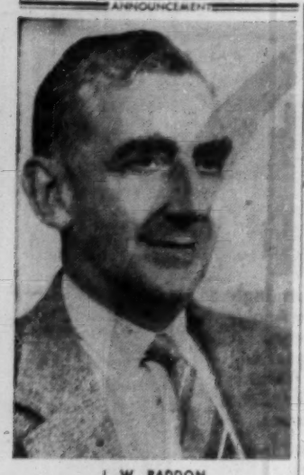

J. W. PADDON

The Directors of Decca Radar (Canada) Limited announce the appointment of Mr. J. W. Paddon as Manager of their Radar Systems Division.

A native of Canada, Mr. Paddon's radar experience began at the Royal Aircraft Establishment in 1939. In World War II he was stationed in Washington by the Department of Munitions and Supply and returned there during the Korean crisis as chief of the Electronics Division of the Department of Defence Production.

Prior to his present appointment, Mr. Paddon was supervisor of administration in Canadair's Special Weapons Division.

Mr. Paddon is a senior member of the Institute of Radio Engineers.

125th SECORD SHOP

MONTREAL (Staff) — The 125th Laura Secord shop was opened in Montreal last week. It is described as the newest, largest and most modern of the shops which extend from Quebec City to Winnipeg.

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Labor Troubles at Chrysler

Nightmare With a Happy Ending

This is the chilling story of how a minority group of disgruntled union members can hamstring a manufacturing giant.

It's a tale of a labor relations nightmare which lasted many months.

The company involved happens to be **Chrysler of Canada.** And a happy ending now seems assured.

But there was a time when a huge wildcat strike threatened to explode. This might well have fathered a future of bitterness and guerrilla warfare between Chrysler and United Auto Workers.

As it was, repeated slowdowns and walk-outs by rebellious unionists triggered these results:

- Chrysler was unable to produce sufficient numbers of 1957 cars last winter and spring. Its whole production schedule was wrecked, sales affected, cost estimates jumbled.
- The company's successful drive during 1955 and 1956 to increase market penetration greatly came to an end—but only temporarily, the company says.
- Measures designed to boost production efficiency for output of 1957 models were negated.
- The quality of the Chrysler products suffered. There were incidents of deliberate damage to cars on the production line. (Both union and company report that quality now is good. "Better than it has ever been," says a union official.)
- A deep split developed among union members. There were fights and arguments between the hotheads and unionists who wanted to stop the trouble in order to get a full week's work—and a full week's pay.
- Top union officials conferred with top company men before cracking down on the trouble-makers. A union "trial" was threatened for 20 members who walked off the job.

Near Anarchy

To get an idea of how close it came to industrial anarchy, take the week beginning Monday, April 22.

Because of impromptu work stoppages and slowdowns, there wasn't one of the five workdays in which Chrysler produced motor vehicles for the full day.

The union estimates that between Jan. 1 and July 20 there were 60 work stoppages.

(Local union officials freely concede that rebellious workers were often in violation of the union constitution and of the contract between UAW and the company.)

What caused it all?

There were a number of key factors.

Jacking up its sales from 15% to around 26% of the Canadian new car market within two years, Chrysler had hired thousands of new workers.

Many of the newcomers were young, unmarried. Some of these were quite ready to down tools for an unexpected "holiday" two or three times a week.

Older, more responsible workers predominated but they couldn't keep production running smoothly if others walked off the job.

Straining to catch **Ford of Canada** in second place in the car sales race, Chrysler pepped up efficiency for production of 57s.

Better Line

A new, better body line was put in. Output of DeSotos—never large—was discontinued in favor of importation. (For 1958 models, the company has resumed DeSoto production in Canada.)

Some new work standards were set.

With all these changes being made, there was a period of adjustment.

The local union began claiming a work "speed-up" was under way.

Too, the union local was a new one, having split away from an older local less than a year before.

It had growing pains, was divided among various factions. One of these was a left wing-Communist group, small but always ready to stir up trouble.

Combine the transition going on within the company with that inside the union membership and you have the ingredients of a labor explosion.

As slowdowns or work interruptions grew in numbers, an unhappy situation developed.

Stoppages in one department idled men in others. This meant that the company sent home many employees who had no part in causing the trouble.

Bad Feeling

This generated bad feeling against the company and also between factions of union members.

Finally it became obvious that production, sales, quality of output all were being damaged.

This hurt everyone, company executives and workmen alike.

There were top-level meetings, some involving Canadian Auto Worker Director George Burt and Chrysler President Ron Todgham.

Both sides agreed to do everything possible to smooth the situation, ease minor irritations, adopt a conciliatory tone.

A general membership meeting of the union April 28 adopted a two-part resolution.

Union Decision

It called on members not to engage in work stoppages, threatened a union trial of offenders.

And it asked Chrysler for what it called a "more realistic approach," assurance that grievances would be settled as quickly as possible, requested also that the firm not send home the whole plant as a result of disagreement over production standards.

Todgham replied in a letter congratulating Burt and Brooks for their insistence that unionists abide by the contract.

He said flatly Chrysler had taken no action meant to provoke work stoppages.

And he added that since the April 28 meeting normal production had been restored.

Nevertheless, there was still sporadic trouble.

On the evening shift of July 20—a Friday—31 workers walked off the job. Twenty were from one location, 11 from the assembly line itself. The absence of the group of 20 caused a work stoppage.

The union knew that the group of 20 most certainly had violated the contract and its own constitution.

Called Trial

Within a few days, it was decided to call a union trial.

This was to take place within 60 days.

The fact that it did not mirrors the improved company-union relations which now exist.

When there were no more work stoppages and product quality improved, the union decided not to rock the boat by going ahead with its trial.

Instead it recently sent a "letter of guidance" to the offenders telling them flatly they had been wrong.

The letter was printed in the union's shop paper — "as a warning to everyone," Brooks told **FP**.

In recent weeks hundreds of grievances have been disposed of, without necessity of formal hearings.

A friendlier, give-and-take attitude has grown between the company and union.

Production efficiency has leaped. Many of the most troublesome workers are gone. Having little seniority, they have been laid off in work force reductions.

Production of 1958 models has begun. Chrysler now will resume its hard push toward second place among Canadian new car producers.

The union is making helpful sounds. In a recent shop paper, Brooks wrote:

"Let's give it a chance fellows. No one has to work too hard — a fair day's work is all that is asked."

There's now wide hope that the reconciliation of the union and Chrysler is complete—and that company-union infighting will take place at the contract bargaining table not on the production line.

How Union Trial Works

A union "trial" of any of its members is a rarity.

For reasons of internal peace the leadership of a union local and of its parent national or international organization will do much to avoid such a controversial and divisive event.

If United Auto Workers had gone ahead with its plan to try 20 of its members employed by **Chrysler of Canada,** here's the procedure it would have followed:

The men could have been tried individually or in a group. They have the right to legal counsel, if they wish.

A union meeting is held to elect a trial committee.

Every union member at the meeting has his name put on a ballot. Nineteen names are drawn.

These form a panel from which the "judges" are chosen. Both sides to the trial can challenge five members of the panel.

The nine remaining form the trial committee, with two being alternates.

Trial is similar to ordinary courtroom procedure. Prosecution is by the union local.

The verdict is by majority vote.

The trial committee can recommend anything from reprimand to expulsion from the union. The latter could have meant loss of jobs.

The membership of the local then votes on the verdict, can sustain it, reject or amend.

There is provision for appeal to United Auto Workers' recently constituted international independent seven-man public review board. There can be further appeal to a constitutional convention of the international union, held every 20 months.

Should the trial committee bring in a recommendation based on constitutional policy, and if it's rejected by the local membership, the international union can overrule the members.

This proviso was applicable in the Chrysler case.

"The men had violated the union constitution," said Local President Charles Brooks.

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What's Next Union Move In Gaspe Legal Tangle?

MONTREAL (Staff) — The strike is over but the bitterness lingers on.

After 31 angry, violent weeks, Steelworkers Union called off the strike at **Gaspé Copper Mines.** The strike had obviously been broken, but the union's tacit admission of defeat came with surprising speed and bluntness.

The union isn't likely to remain as subdued as it now is:

- It could decide to make things tough for **Noranda Mines** — Gaspé's parent — when next the two sit down at the bargaining table. There's no love lost between the steel union and Noranda.
- Balked so far by court action and the disastrous strike, the union isn't going to give up its ambition to become the certified bargaining agent at Gaspé. It was this ambition which lay at the root of the original dispute.

Prior to the strike-end, the company had slowly built a work force to replace the strikers. Recently Gaspé's production has been running around 80% of normal — enough to meet present demands.

The Gaspésians who stuck with the union leaders are now out of jobs — and the company has made it clear there is no question of firing present employees to give strikers back their old jobs.

However, it seems obvious to observers that the more outspoken strikers can have little real hope of getting jobs back unless Steelworkers gains control of the whole employee body.

A Steelworkers spokesman offered this explanation to **FP**: "When Gaspé Copper tied up our application for certification it put us technically outside the protection of the law.

"Now the courts have ruled against the company injunction. So we are back inside the law's protection.

"The labor relations board can now certify us," he added.

The question: Will it do so? It's improbable that a majority of the present employee group supports Steelworkers, even if the striking employees did.

A mammoth damages suit has been gathering dust as the strike lengthened. Issued in May, the company asked for over $2 million from the union local.

Since then an additional $80,000 or so has been added weekly, bringing the probable total up to a hefty $4 million-plus.

The Cloak and Dagger ...are "old hat"

We know all about the "underground movement", but we don't use the cloak and dagger. In our operations we are modern as tomorrow. We work with Canadians in every industry and public utility to ensure safety, security and growth.

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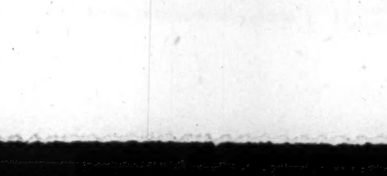

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Those are the reasons why you have to wait months for an appointment with your dentist . . .

Here's a special report on the woes and problems of . . .

Our Misunderstood Dentists

By E. McWHINNEY

Here's why you have to make appointments with your dentist weeks, or even months, ahead of time:

● **Canada has a shortage of training facilities** for dentistry. Although additions are being made, there's little prospect of doing much more than preventing the shortage from getting any worse.

● **Dentists have hefty overhead costs,** attain peak earning power for only a comparatively few years. This frightens some students away from the profession, persuades some established dentists to leave it.

● **The dentist's chair terrifies some people,** makes most extremely nervous. This has the psychological effect among students of preventing them from giving fair consideration to a career in dentistry.

Measure our shortage of dentists:

At the beginning of 1957, Canada had 5,481 practicing dentists — one for every 2,934 people.

The U.S. — greatly concerned by its own shortage — had a dentist for every 1,950 people.

Canada graduated only 205 dentists in 1956, while 160 left the profession. Of the latter, 80 died, 41 retired, 39 went into other businesses, on leaves-of-absence, on post-graduate courses, etc.

Not all the new graduates will actually practice dentistry.

Do you go to your dentist twice a year for a check-up and any necessary work? You should.

But if every one did, each dentist would have to cope with more than 5,500 visits yearly — not counting emergency cases.

That would be more than 105 a week, more than 20 every workday.

If the dentist can squeeze in a patient every half-hour, he would still have to work 10 hours daily, or 50 hours a week — again making no allowance for emergencies or holidays.

An important—and often overlooked—factor in the shortage is that dentistry is a one-operator business.

A dentist has to perform most of his work himself; the amount of concentration involved, the strain caused by the constant demand for careful, top-grade work both set a natural limit to the dentist's working capacity.

He cannot afford to work when he tires.

Apart from the possible risk for his patient, his practice will suffer if his work is at all careless.

In 1954, the Canadian Dental Association published "A Survey of Dental Practice in Canada," which has helped shed light on the amount of work a single dentist can adequately perform.

The report was based on a survey of one-third of all practicing dentists in Canada.

It sets the most profitable number of working weeks for a dentist, per annum, at 46 or 47.

Dentists who tried to work for longer or shorter periods found that their incomes suffered.

The mean number of hours per week spent at work in the dental office during 1953, amounted to 41.5 for practitioners and 39.2 for specialists. This remains roughly correct today.

The survey established that the most desirable average time, per appointment, amounted to 45 minutes for adult patients.

And it found that net income per annum reaches its highest point for dentists between the ages of 39 and 43, after which it shows a decline.

In other words, a dentist cannot count on a steady annual income for any length of time.

It takes the average dentist a number of years before he reaches a good income level (over 10 years of dental practice before he reaches his peak) and he usually does not maintain this position for very long.

Though a dentist may continue to work after the age of 60, his income will have declined considerably and will continue to do so.

This is no reflection on the ability of older dentists but both the psychological and physical requirements of dentistry set a natural age limit.

Also often quite unfairly, some patients assume that younger dentists will be more modern in their methods and technique.

On the financial side, dentists' costs are often underestimated by the public.

Of three professions, medicine, consulting engineer and architect and dentist, the latter earns the least net income.

An informed estimate is that average net income per year for the practicing dentist at the end of 1956 did not exceed $8,400.

Since the dentist's average gross income is about $17,000, his overhead eats up about half his gross.

Not paid as overhead and therefore deducted from net income are all expenses for pensions, insurance, medical and hospitalization protection.

Considerable capital cost is involved in setting up in dentistry. Initial outlay for equipment will be around $7,000 or $8,000.

Too, when new equipment is developed, dentists' patients will expect them to acquire it quickly.

Lack of training facilities may be the biggest reason for the shortage.

In 1956, the University of Toronto graduated 78 dentists. It cannot accommodate more than about 75 students in the clinical years of the dental course.

There are four other dental schools in Canada — the University of Montreal, McGill University, University of Alberta and Dalhousie in Nova Scotia.

A new dental building is being constructed in Toronto, with completion expected in 1959. It will make available facilities in Toronto for 50 additional students.

Manitoba is expanding to accommodate 40 students and Dalhousie has increased its dentistry student group to 24.

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LABOR AND THE LAW

Unhappy With Low Wage, Loses Jobless Pay Bid

Significant rulings in the broad field of labor law are reviewed in this regular FP feature.

Are you entitled to unemployment insurance if you leave your job because your earnings are suddenly and sharply lower than expected?

On the answer to that question hung the outcome to this case.

Walter, 20, was a bushworker for the XYZ Co. He left his job after only a few days because, he said, there was a lot of snow and he could only earn $7 a day. This was less than he had planned on.

(The employer said later he had averaged $8.35 daily.)

Walter applied for unemployment insurance. He was disqualified from benefit by an insurance officer, who said he had voluntarily left his work without good cause.

He appealed to a board of referees, which rejected his plea.

Walter's union appealed to the umpire, under the Act.

The union said, in effect, that Walter's wages were far less than he could reasonably be expected to accept. Had he known the pay would be so low, he would never have taken the job. Nor should he be compelled to do so.

This didn't impress the umpire, who ruled:

"The working conditions, although less favorable than during other periods of the year were, however, the ones that the claimant could expect during March . . .

"Needless to say, as a bushman, he cannot draw the same salary during the hard snow period as during the fall. Those are disadvantages inherent in the trade.

"As he had no other employment in sight, I consider that he should have kept the one he had.

"The appeal is dismissed."

Result: Though the wage level is an undeniable factor in determining suitability of employment, it was only a short-run factor here. Therefore, it should be ignored.

Source: Decisions of the Umpire, Unemployment Insurance Commission, Case No. CUB-1285.

Offer $1.5 Million Hendershot Bonds In Two Series

Two new issues of **Hendershot Paper Products Ltd.** sinking fund bonds, totaling $1.5 million, are being offered at par by **Harrison & Co.** Each issue carries stock purchase warrants.

A $1-million issue of 6½% first mortgage bonds will mature Sept. 1, 1977. Each $1,000 bond will carry warrants to buy 30 shares at $5 per share until Aug. 31, 1959; $7 for the next two years; and $10 for the following year. Recent price on the Toronto Stock Exchange is $5¼.

The other issue consists of $500,000 6¾% general mortgage bonds, Series A, due Sept. 1, 1982. Each $1,000 bond carries 30 warrants, exercisable on the same terms as those attached to the 6½% bonds.

Proceeds will be applied to the construction and equipment, at a total cost of $2,045,000, of a one-story plant of concrete block and steel on a 23-acre site between Oakville and Hamilton, Ont.

To be completed before the end of 1957, the plant will have 155,000 sq. ft. of manufacturing space and 10,000 sq. ft. of office and design area.

When operations are moved to the new plant, the two Hamilton plants now in operation will be closed. Company manufactures corrugated paper shipping containers and corrugated single-face specialty items.

Net profit after taxes for the six months ended June 30, 1957, totaled $31,609. For the full year 1956, net profit was $175,862, compared with $169,300 in 1955.

"Sales in the first few months of 1957 reflected current credit restrictions which induced cautious buying policies and depletion of inventories on the part of customers," said President John C. Colclough.

"Earnings in May and June exceeded those of the previous four months, and it is anticipated that operations for the remainder of 1957 will be maintained at this level."

Balance sheet at June 30 shows current assets of $982,371, net fixed assets of $539,877, and patents, trade names and contracts valued at $45,000. Current liabilities were $262,207, and earned surplus $363,195.

Equity capitalization consisted of 10,000 authorized and 7,000 issued 6% cumulative redeemable preferred shares, par $100, and 240,000 authorized and 155,284 issued npv common shares. There was no funded debt at that date.

Group Prepares 'Export' Guide

A guide listing the documentation requirements for exporters shipping to any part of the world has been prepared by the Canadian Exporters Association and mailed to its 350 members throughout the country, J. C. McDerby, general manager of the association, has announced.

Exporters can now determine at a glance what documents they must obtain to despatch a shipment via freight, parcel post or air cargo to countries in both western and eastern hemispheres. General notes contain selected regulations and procedures in abbreviated form.

Along with the guide is a 10-page list giving the names, addresses, phone numbers, and office hours, of all the consular and trade representatives of foreign countries at principal points in Canada.

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Supplies, Prices Stay Firm Report Purchasing Agents

Prices that may go up: Ammonia, veal, turkeys, grade A small eggs.

Prices that may go down: Smoked meats, sulphuric acid, scrap steel, castor oil.

These are among the predictions of the Canadian Association of Purchasing Agents. The association's latest monthly bulletin goes out to members this month.

Industrial Chemicals

Heavy acids were in free supply as the industrial pace showed little sign of quickening. Recent drop in crude sulphur prices is expected to be reflected in sulphuric acid prices.

Ammonia-Anhydrous — Output continues to rise with increasing demands from fertilizer and industrial users. Higher prices expected in the new year. By the end of 1958 annual capacity in Canada may approximate 600,000 tons.

Carbon Tetrachloride—Is now made in Canada with new plant of **Cornwall Chemicals** now in production.

Caustic and Chlorine—Readily available. Price trend steady.

Ethylene Glycol — Price advanced .25c to 15.25c lb., reflecting change in U. S.-Canadian dollar rate.

Sulphur — In the first price change since 1954, U. S. domestic prices dropped $3 to $23.50 long ton, f.o.b. mines for crude bright sulphur. Drop caused by competition from Mexican operations.

Coal

The market remains easy as it has been for the past several months. Supply is more than adequate, and prices are lower than last spring.

Cars are in good supply, and the self-unloader situation is better than it has been for several years.

No word has been heard regarding higher wages and it is not likely that there will be any change this year.

Building Materials

There is little or no change from last report in the Montreal and Toronto areas except for a slight easing in spruce lumber in the former locality.

All supplies are adequate with the exception of heavy structurals, particularly H-beams and there is some shortage of oak flooring.

Containers

Paper — The multiwall sack supply is adequate and deliveries remain good. Decline in demand, usually expected at this time of the year, has not so far been felt.

Plastic — Deliveries on most plain films and rigid containers remain good with two to three weeks' delivery on plain, and four to five weeks on printed material.

The pouch type of package is starting to gain a lot of ground in the packaging field—first, because of the lower cost, and the "see through" feature, which is possible with various films. Secondly, it lends itself readily to "automation."

Food

Fruit — The Canadian crop of peaches is estimated at 2.5 million bushels — 49% above last year's. "V" types in Ontario are finished and Elbertas past their peak. B. C. crop is complete with canneries taking a large percentage of the Elbertas.

Apples are estimated at 5% above last year with B.C. showing a 44% increase and all others except N.B. being considerably down. Manitoba Apples are appearing in good supply and quality at reasonable prices which will tend to soften.

Vegetables — Quebec beans, corn and tomatoes being packed show excellent quality. Ontario tomatoes, near peak volume in delivery to processors, are generally good.

Ontario potatoes steady in price and of good quality but the pumpkin crop is expected to be much below normal.

Manitoba vegetables are in good supply but potatoes tend to be wet and soggy and have hollow centres due to a rainy season.

Meat — Prairies — Price of beef remains seasonably stable; supply is good on all grades. End of fall run of veal very near. Supply is weakening, and price increasing.

Pork is in greater supply than during the past few months, but not sufficient to meet demands. No storage stocks of smoked meats available as demand is far beyond supply. Price softening slightly, and further decrease expected.

Lamb is quite plentiful and grades excellent. Peak expected early part of October.

Poultry — Prairies — Supply of fowl is quite good and the price reasonable. Turkeys still in good supply, but the demand during October will be greater, and price will likely increase slightly.

Eggs — Prairies—Supplies of grade A large and medium eggs not too good, and price quite high. Grade A small eggs are coming to the end of their run, and one can expect an increase in price.

Oil and Gas

There have been no further changes in the Quebec or Ontario markets on fuels since the beginning of September.

Imports of U. S. fuels into Canada have been substantial and stocks are generally high at the present time.

Ferrous Metals

Inventories still are the major factor governing the steel market. The reductions that started in early spring are still going on, with purchasing, in general, playing it close to the chest."

The outlook for the balance of the year indicates little change in general products with the automotive industry in particular not living up to expectations.

Bars — Are still in very free supply with some mills now rolling excesses intentionally for readily available stocks.

Pipe and fittings — All sizes of steel pipe are in good supply. Warehouse stocks are adequate and mills, without the usual backlog of orders, are accepting new orders for immediate delivery.

Distributors of welding fittings are competing actively for available business.

Plates — Plate over 52 in. is still in quite short supply. Heavy, wide plates are still very short while narrower widths are quite readily available.

Scrap — The flow of scrap to the mills is continuing at a substantial level in the face of a downward price trend. Sharp drops occurred in September and early October.

There does not seem to be anything to indicate a firming of scrap prices in the immediate future. On the contrary, present supply is very adequate and will contribute to softening of the market. On the west coast active export has helped support local prices.

U. S. mill operating rates are 80% of capacity. The Canadian rate is very close to normal.

Sheets — Hot rolled, cold rolled and galvanized are still wide open with inventories being kept to a minimum and buying being maintained on spot openings on mill with very prompt delivery.

Structurals—Standard beams and channels are still in reasonably free supply with some mills stocking sizes for prompt shipment. Other sizes can be obtained on short notice from open rollings.

Wide flange sections still fairly tight but a good many sizes are available at premium prices.

Non-Ferrous Metals

Aluminum — The situation remains the same, with ample stock in warehouses for immediate delivery. Mill schedules remain unchanged.

Copper — Canadian fabricated goods are in ample supply but bookings are slighdly heavier as inventory re-ordering has become necessary.

Lead — Canadian demand is a little better and the supply adequate. Some improvement is expected and year-end stocks in the producers' hands may be quite low.

Mercury — Sales activity on slow side, due to a reluctant desire to buy on the declining market.

Nickel—Canadian consumers have no problem in obtaining nickel as the production is steadily climbing and no doubt will reach the expected increase of 130% from 1951 to 1961.

Tin — Relatively unchanged from last report. Demand quiet on both sides of the Atlantic.

Zinc — The domestic zinc market remains very quiet. The metal is in good supply with consumers' demands moderate to light. Prime western holds firm at 10c per lb.

Paint and Varnish

Castor Oil — Prices have declined on the eastern seaboard and this trend may continue further.

Linseed Oil — The drastic reduction in U. S. flax crop estimate helped firm the October futures at around $2.90 bu. Hedging by country elevators apparently has not reached a peak on the Winnipeg market as yet, and if the market remains firm under this influence, higher oil prices are more likely than previously thought possible.

Rosin — Although production of pale grades of gum rosin has been very poor, owing to weather conditions, the market has been steady and the usual seasonal price increase on this commodity has not yet been noted.

Shellac — The Calcutta market is steady and prices remain unchanged.

Soyabean Oil — Soyabean oil remains 3c lb. lower than linseed oil, and the price of cottonseed oil on the edible market seems to be the chief restraining influence. Higher soya oil prices do not appear likely in the near term. This year's crop of beans is one of the highest in history.

Paper

The industry thinks that for the next three years the supply will be sufficient to meet the need. Then it is expected that the demand will catch up and possibly exceed the supply again.

Board—Some boxboard mills are running to capacity. September corrugated carton production is above last year.

The Pacific coast reports weakening in board production from last month. Mills there are now on current orders with little or no backlog. No reason has been determined for this slight fall other than inventory build-up in view of the possible increase in price of paper board following on the bleached pulp increase for the fourth quarter. This business is expected to pick up on the coast from about the middle of October to the end of November.

Fine Papers — The Prairies' situation has worsened slightly. While there are no reports of significant cut-backs in production, there has been downtime reported on some mill equipment due to lack of business, and all mills are eager for additional tonnage. As a result, deliveries are excellent and it is therefore reasonable to expect that consumer and merchant inventories are being maintained on the low side. Envelope business is brisk.

Kraft — Is apparently still holding up well. The Prairies report normal backlog and normal mill production but see competition stiffening in Central and Western Canada with new supply lines now available from the west coast. The B.C. coast views kraft in the same way as it does board. Eastern wrapping paper and liner board demand is not sufficient to keep mills fully occupied.

Newsprint — Mill sales personnel are now actively soliciting new business in Central Canada after years of being hard-pressed to take care of their own customers' requirements. The newsprint situation generally speaking is one of over-production, and several mills have found it necessary to cut production considerably.

It would appear unlikely that prices will increase in view of the abundant supply and the now declining discount rate on American funds.

Rubber

Crude — There is a chance that natural rubber will give the synthetic product keener competition in the final months of this year.

Availability of natural rubber is expected to remain fairly constant until after 1960, when new Far East and Liberian plantings can be tapped.

Synthetic — Production of synthetic rubber in Japan is likely to start in 1960 instead of 1959 as planned.

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Two Big Seaway Contracts Completed Within Schedule

One of the toughest excavation jobs ever tackled in North America and another which is among the most spectacular in Canada have been completed.

Both represented major contracts in the St. Lawrence Seaway project, and were completed within a tight schedule.

- First was the Iroquois lock and canal which involved carving a giant slice through glacial till and limestone and the pouring of about 330,000 cu. yds. of concrete in 56 weeks.
- The other is the placing and compacting of all earth fill on the 3½ mile long Cornwall dyke, one of the first major contracts for the Ontario Hydro half of the international power development.

Foundation Co. of Canada Ltd., managers of the Iroquois lock and canal contract for **Iroquois Constructors Ltd.**, worked round the clock in summer and two shifts a day in winter to get the job done in time.

Iroquois is the key control point. It cuts through Iroquois Point allowing shipping to bypass the Iroquois control dam, and the lock had to be filled and tested thoroughly before the close of navigation next month.

The lock canal slices 43 ft. deep and 80 ft. wide through soil and limestone as dense as concrete, and at each end it fans out to 300 ft. flanked approaches to the ship channel. The finished lock canal carries 30 ft. of water over the sills, is 1,287 ft. long and will pass a 720 ft. ocean vessel between its lockgates.

The canal itself remains dry as work is rushed to completion on the lock gates and control houses. It is expected these will be completed in time to allow shipping to test the lock during November.

Biggest Equipment

A fleet of tractor-scrapers with 22-yard capacity, three and four cubic-yard excavation shovels, eight bulldozers up to the biggest 300 hp size, and 16 Euclid 22-ton trucks were employed to clear the canal excavation and pile it on the Canadian shore immediately south of the present Galop ship channel. The fill will be used to back-fill the Galop canal when the new Iroquois lock comes into use next year.

Working with the same speed under floodlights or daylight, three shifts a day began in midsummer 1956. Cut back to two shifts daily in winter weather, the work continued six days weekly for just over a year with only eight days when holidays, weather or other factors necessitated a stop in the concrete pouring.

A concrete mixing plant was erected on the site and for the winter pour a boiler plant was constructed and steam lines run to the stockpiles of stone and sand aggregate, and to keep the mixing water at 150 degrees Farenheit. Throughout the winter the concrete had to be protected from the weather for three days after it was poured.

Throughout the 56-week period, Foundation crews averaged better than 5,300 cubic yards of concrete work a week. On one day last August they poured 1,752 cubic yards. Total concrete poured was enough to build a sidewalk from Toronto to Winnipeg.

Weather Helped

On the Cornwall dyke, where the job was handled by three contractors, only about six weeks of finishing work has to be done.

Here, good weather during the past summer and early fall greatly aided the job. A total of some five million cu. yd. of glacial till has been placed and compacted on the dyke which stretches from the north end of the powerhouse to the vicinity of the former village of Moulinette.

The main contract, handled by **Atlas Construction Co.**, was for a three-mile stretch of the dyke requiring the placing of some three million cubic yards of earth fill. The other two short sections of the dyke were built by **C. A. Pitts, General Contractor Ltd.**, and **Iroquois Constructors Ltd.**

Cornwall dyke will have the important function of helping to contain the headpond of the International St. Lawrence power project when the water is raised next summer. At that time, the project is scheduled to start initial production of power and ultimately will develop a total of 2.2 million hp., half of which will be going into Ontario Hydro's system.

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ANNOUNCING

Important appointments in Canadian industry, Finance Business and Government.

Alliance Assurance Co. and **Westminster Fire Office (Montreal)** — E. A. Cooke manager for Canada, succeeding F. J. Flanagan retired.

Brantford Oven & Rack Co. (Brantford, Ont.)—John E. Mott, president, succeeding S. W. Stedman retired.

University of British Columbia (Vancouver) — Mrs. Frank Mackenzie Ross, administrator of oils and fats for Wartime Prices and Trade Board during the war years; Walter Koerner, lumber industrialist, and Einar Gunderson, financier, to be governors.

The Building Centre (Toronto) — Robert G. Calvert, formerly architectural editor of Canadian Homes and Gardens, technical director.

Canadian General Electric Co. (Toronto)—Ian F. McRae, vice-president and general manager of company's civilian atomic power department, Peterborough, to be director; Walter G. Ward, general manager, apparatus department, succeeding J. H. Smith, now president.

Canadian National Railways (Montreal)—Kenneth H. Hand, manager photographic branch, succeeding W. H. Robinson, retired.

Canadian Premier Life Insurance Co. (Winnipeg)—Norman A. Healey, director of agencies, at head office.

Canadian Trailmobile Ltd. (Toronto) Robert A. Mitchell, manager, branch operations.

Carrier Engineering Ltd. (Toronto) —Edward Ruddock has joined sales department as industrial specialist on heavy duty centrifugal machines; Stuart Misener, member engineering department in Toronto; both previously with Carrier Corporation, Syracuse.

Central Mortgage and Housing Corp. (Ottawa) — H. C. Linkletter, Ottawa, Ontario regional supervisor, succeeding H. W. Hignett, transferred to senior position at Ottawa.

Chemical Developments of Canada Ltd. (Montreal)—H. H. Behrens, vice-president and general manager; Dr. Cosmo Marchant, assistant general manager.

W. Clark Ltd. (Montreal) — M. B. Tennant, formerly comptroller, Beatty Bros. Ltd., to be controller.

Combined Insurance Co. of America (Toronto)—Gerald Wright, a sales manager, in Ontario.

Commonwealth Construction Co. (Winnipeg)—R. H. Ansley, Pacific manager and director.

Crown Life Insurance Co. (Toronto) Rt Hon. C D. Howe, formerly minister of Trade and Commerce for Canada, a director.

M. M. Dillon & Co. consulting engineers (London, Ontario)—W. K. Clawson, vice-pres., and manager Toronto office; J. J. Heffernan, partner in charge development; R. A. Crysler, consultant.

Firemen's Fund Insurance Co. (Toronto)—M. H. Crone, manager for Canada succeeding John H. Kennedy, resigned to enter insurance agency business, at Woodstock, Ont.

Fruehauf Trailer Co. of Canada Ltd. (Weston, Ont.)—W. T. McDougall, comptroller, also becomes comptroller Trailer Acceptance Co., subsidiary company; Norman Milne, plant manager, manufacturing operations across Canada; C. R. Tisdale, formerly advertising manager Ford Tractor and Equipment Sales Co. of Canada, to be advertising and public relations manager.

Gaspesia Sulphite Co. (Quebec City) — E. L. Neal, general manager, to be a vice-president, and a director.

Greenshields & Co. (Montreal) — Peter Kilburn, appointed president.

Hamilton Spectator, The Southam Co. (Hamilton)—James S. Thomson, national advertising manager, succeeding H. O. Thomasson, appointed personnel relations manager of the newspaper.

Huron & Erie Mortgage Corp. and Canada Trust Co. (London, Can.) —John J. Stuart, Windsor, vice-pres. J. T. Wing & Co., and S. Murray Clark Harrow, manager Amherstburg Fuel & Supply Co. and Kingsville Coal and Dock Co., join Windsor advisory board.

Jamaica Public Service Ltd. (Montreal)—Richard N. Benjamin, New York, president Stone & Webster Service Corp., etc., to be president, succeeding the late Russell D. Bell.

Jamaica Public Service Co. (Kingston, Jamaica)—Richard N. Benjamin, New York, chairman, succeeding the late Russell D. Bell; F. W. Utz a vice-president of the company and also president Safe Harbor Water Power Corp., Pennsylvania, and Richard O. Johnson, partner in Greenshields & Co. Montreal, of which Mr. Bell was also a partner, to be directors.

Lake Shore Mines Ltd. (Kirkland Lake, Ont.)—W. T. Robson, general manager.

Herbert Morris Crane & Hoist Co. (Niagara Falls, Ont.)—J. A. Morehen, general sales manager; W. H. Rogerson, general works manager; C. Stead continues as director and chief engineer of the company.

National Life Assurance Co. of Canada (Toronto)—Charles T. P. Galloway, associate actuary, to be actuary.

Nesbitt Thomson and Co. (Montreal) —L. J. Forbes, manager Ottawa branch, succeeding B. E. Dabson, resigned from active management of the office but continuing in advisory capacity.

New Brunswick Department of Agriculture (Fredericton)—R. D. Gilbert, deputy minister, succeeding Dr. E. M. Taylor, retired.

O'Brien Advertising Ltd. (Vancouver)—Noel Wright, head of creative department and member agency plans board; Michael Carreck, copy chief.

Ocean Cement and Supplies Ltd. (Vancouver) parent company of recently amalgamated B. C. Cement Co. and Evans Coleman and Gilley Bros. Ltd.—Gordon Farrell, president of both component operating companies and president B.C. Telephone Co., president; Wm. F. Foster, Vancouver, executive vice-pres. of Evans Coleman and Gilley Bros. and J. D. Milne, an executive of Associated Portland Cement Manufacturers Ltd. of England, vice-presidents; Rt. Hon. C. D. Howe, Hon. Clarence Wallace, H. S. Foley, Robt. I. Ross, directors.

Pacific National Exhibition (Vancouver)—Albert P. Morrow, vice-president and director of Western Sales, Eric H. Hardman Ltd., to be general manager, succeeding V. Ben Williams resigned, some months ago.

Procter & Gamble Co. (Cincinnati) —Edgar G. Burton, chairman and president, Robert Simpson Co., Toronto, chairman and president, Simpsons Limited, and chairman Simpsons-Sears Ltd., to be director.

Railway & Power Engineering Corp. (Toronto)—W. B. Proudfoot, sales-manager—technical division.

Robin Hood Flour Mills Ltd. (Montreal) — W. H. Lewis, manager Montreal plant.

Roxalin of Canada Ltd. (New Toronto, Ont.)—J. Stuart Brydon, assistant general sales manager; B. F. Bush, sales representative, taking over Mr. Brydon's duties in Ottawa area.

Salada-Shirriff-Horsey Ltd. (Toronto)—E. M. Ballon, marketing manager for Shirriff Division; was formerly with Colgate Palmolive Ltd., in charge of marketing operations across Canada, succeeds Donald F. Philp, now director of marketing for Salada Division.

Saskatchewan Mineral Resources Department (Regina)—Donald H. Mode, director industrial and metallic minerals, succeeding E. G. Miller, resigned.

Sun Oil Co. Ltd. (Toronto) — John A. Mustard, and James C. Dunlop, industrial products department representatives, Ontario sales territory and Montreal district respectively.

Travelers Insurance Companies (Hartford, Conn.)—Halifax branch moved to Sovereign Building, 136 Spring Garden Road.

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The Secretary, P.O Box 1150, Fredericton, N. B.

Challenging position desired

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BOX 305, THE FINANCIAL POST, TORONTO

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Box 299, The Financial Post, Toronto

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EPS

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New products, new uses, new ideas, new money-makers. We report them here and invite your contributions. Write to 481 University Ave., Toronto.

Slide Rule Diagnosis

A doctor in London, Eng., has devised a slide rule to aid medical diagnosis. Some 340 diseases are listed along one side of the 24 in. rule, while in a window running the length of it can be inserted up to six "symptom strips." The device, which is now in production, is not claimed to be anything more than a reminder of possible diseases to be associated with any particular combination of symptoms.

* * *

Thin Screen Amplifier

Amplifier for X-ray images recently shown to the American Roentgen Ray Society is said to brighten images by as much as 100 times, thus reducing amount of exposure needed for viewing.

* * *

Pillow Phone

Microphone and loudspeaker encased in sponge-rubber is the latest device for hospital patients. Wrapped in washable plastic, it can be put on or under the pillow. Installed in hospital wards, it provides an easy way for patients to speak to nurses — they just press a button and talk into the pillow. The same equipment allows the nurse to reply or the patient to hear radio programs. Made in the U. K.

* * *

Giant Scrap Cutter

A record for size is the claim for a new German scrap cutter. Ships' plates, elevated railways, coaches are the kind of thing it can consume in one piece (where formerly they had to be broken up before crushing). Pressure capacity of the cutter is 1,200 tons. It weighs 360 tons, is powered by oil pumps of 1,000 hp total capacity. Performance is 40 tons of scrap/per hour. It took four years to build, is now being delivered to a customer in the U. S.

* * *

Forest Crusher

Claimed to be one of the largest machines in the world for clearing forests, a new tree crusher flattens four acres in hour. Powered by a 600 hp. diesel engine, it has three dimensions: Length, 75 ft., height, 25 ft., weight, 280,000 lb., fuel tank capacity, 1,000 gals. Priced at about $190,000 in the U. S., it has twin 49 ft.-wide rollers each with 300 teeth.

* * *

Eggbeater

Electric gadget for the kitchen claims to beat an egg while it is still inside the shell. Consists of a tiny, flexible needle which is pushed through one end of the egg, revolves at some 3,000 rpm to mix yolk and white.

* * *

Light Arm

Record players can now be fitted with an arm which has a pressure of only one gram. It is said to be so light that it will do no harm to a record even when dragged sideways over the grooves.

* * *

Selects Discs

For storing records there's a new cabinet made in the U. K. which holds no less than 100. Each one goes into a numbered slot which can be noted on an index. When records are wanted all that has to be done is to set a dial to the relevant number, press a key and the disc moves out. The design is said to be dust-proof and cushioned with non-scratch materials. The playing track is not handled.

* * *

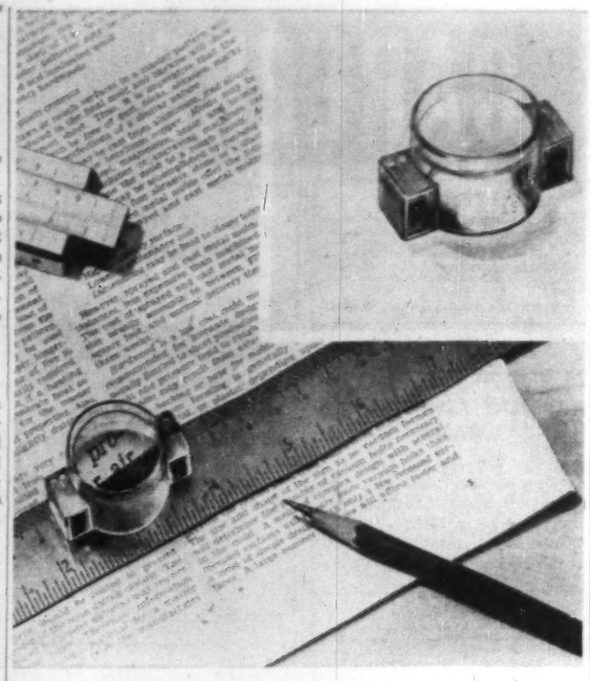
The Last Drop

Now on sale is a new version of the tiny key used for opening some types of can. This model, while still good for cans, will also fit toothpaste tubes to extract the last morsel of paste.

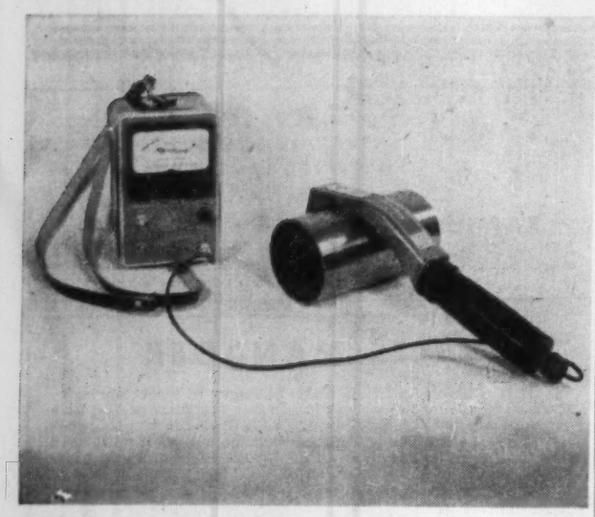
* * *

New Literature . . .

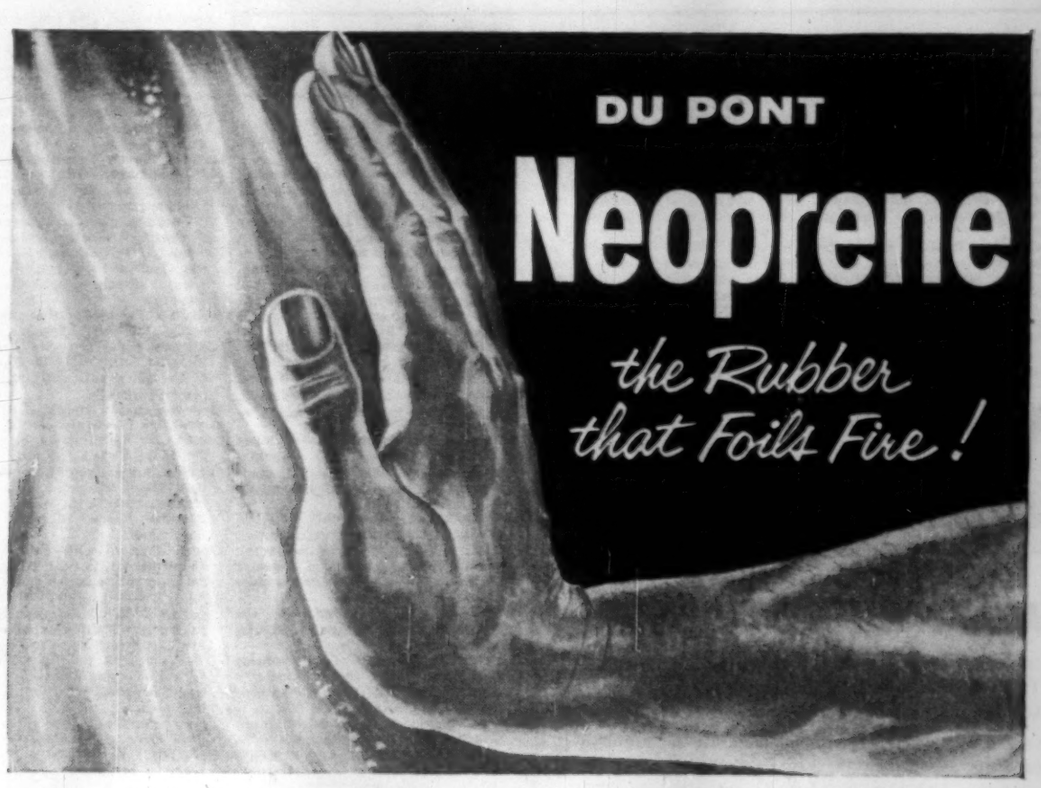
. . . is now available from the U. S. from **Haloid Co.**, Rochester 3, New York, illustrating and explaining the newest xerographic copying process; from **Wheelabrator Corp.**, Mishawaka, Indiana, to show how airless blast cleaning, air blast cleaning and wet blast cleaning have been used in some 50 companies; from **Inserting and Mailing Machine Co.**, Phillipsburg, N.J., describing mechanical ways of billing, paying, inserting checks, notices, etc.



NEW MAGNIFYING glass for use with steel rules or gauges is fitted with twin magnets to hold the glass in place. Molded in one piece, it is housed in a plastic case said to be break-proof.



PORTABLE GAUGE measures absolute pipewall thickness directly on pipes ranging from two to eight inches diameter. Using radiation absorption principle, it is suitable also for nonferrous or plastic piping. Transistorized, it weighs 7.5 lb.



Another Du Pont Contribution to "Better Living"

Ever watched natural rubber burn? Then you know its sudden, fiery heat, its vicious tendency to ignite everything in its path.

A fire starting from a rubber conveyor belt took eighty lives in a coal mine disaster. Rubber printing press rollers turned a small blaze into a million-dollar conflagration when fire swept a newspaper plant.

In today's mine cables and conveyor belts and printing press rollers, Du Pont neoprene is rapidly replacing other products because neoprene does not support combustion.

For safety reasons, neoprene foam rubber today is pre-eminent as filling for mattresses in hospitals and hotels, submarines and aircraft carriers—wherever flammable rubber would constitute a special hazard to life and property. This is only one of the many uses for Du Pont neoprene.

In Du Pont of Canada laboratories, Du Pont research continues to seek out more uses for neoprene . . . and the other new developments which modern chemistry can bring to Canada.

For further information about Du Pont neoprene or any other Du Pont product, write Room A-10, Du Pont Company of Canada (1956) Limited, Box 660, Montreal, P.Q.

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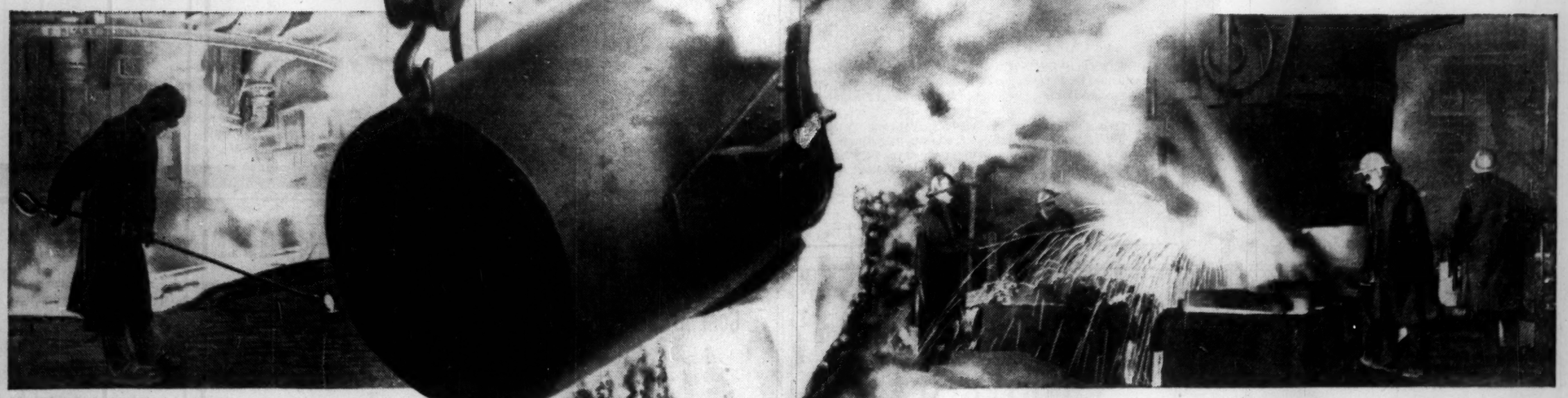


About four years ago, Hamilton's "pioneering steel plant", Dominion Foundries and Steel Limited, decided to "think big" and gambled on a daring new process in modern steelmaking. After a year of vigorous research and testing, ambitious Dofasco unveiled their brand new oxygen furnaces.

Dofasco's oxygen process starts right at home in the oxygen gas plant on the Company's 270 acre Hamilton Bayfront site. Here the high purity oxygen is produced at 300 degrees below zero and piped to the furnaces. It is introduced at high pressure over the surface of the molten iron, rapidly burning out impurities and bringing bath temperatures to 3,000 degrees during the Steelmaking process. The three roaring oxygen furnaces now produce the major portion of Dofasco's ingot steel.

Dominion Foundries and Steel Limited, with employment now well over the 4,000 mark, has become Hamilton's third industry and Canada's fourth largest steel producer.

Dofasco's oxygen success story is just one example of Hamilton's tremendous industrial expansion since World War II. Between Dofasco and The Steel Co. of Canada, half of Canada's basic steel is produced in Hamilton. It's another reason why Hamilton is now Canada's fifth largest and Ontario's fastest-growing major city.*

Keeping pace with industrial expansion is the HAMILTON SPECTATOR . . . the daily newspaper serving the "Ambitious City". For complete advertising and marketing information, contact the HAMILTON SPECTATOR, one of the eight Southam newspapers in Canada. *D.B.S.

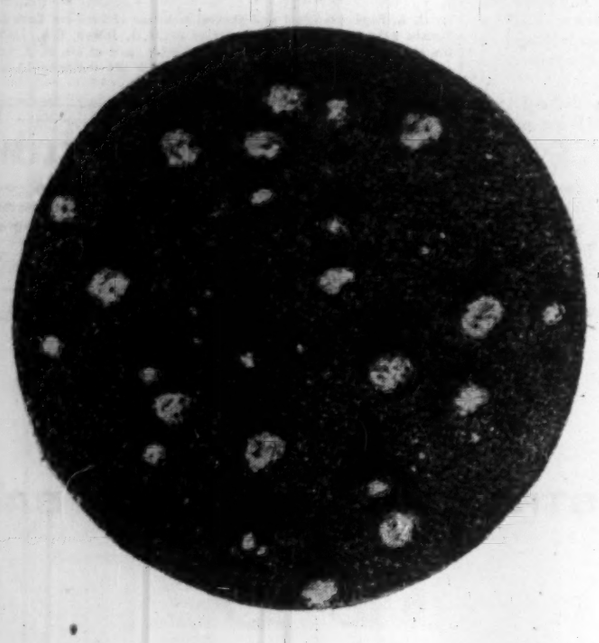
The Hamilton Spectator

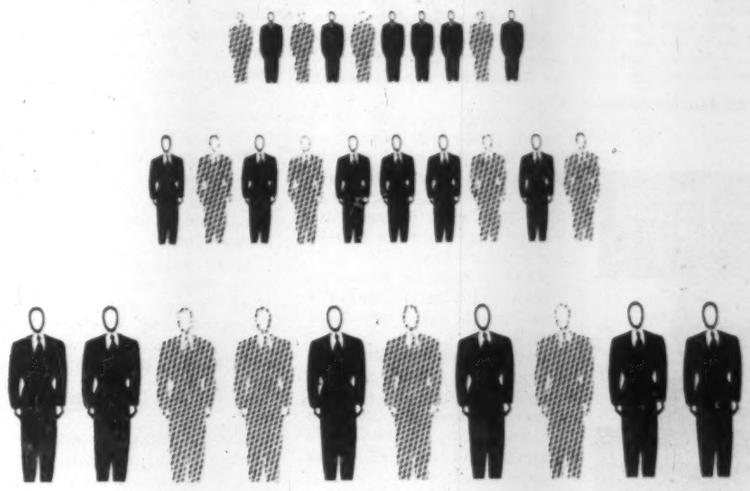
G-5734

The Financial Post

Vol. LI | Member of Audit Bureau of Circulations | Publication Office: Toronto, October 19, 1957 | Twenty Cents an issue, Six Dollars a Year | No. 42

This Tiny Virus Knocks Big Holes In Your Work Force





The Asian flu virus (magnified 100,000 times at left) has paralyzed completely the work forces of many small companies. Even in Canada's larger industrial operations up to four of every 10 workers have been knocked off the job so far. It could get worse.

- **Virus chooses victims at random.**
- **Has it really killed 40 Canadians?**
- **Hard-hit Ontario could get worse.**
- **Maritimes not stricken—yet.**
- **Quebec expects more serious outbreaks.**
- **Has the worst passed in the West?**

How Badly Has Flu Crippled Canada?

ANOTHER FP SPECIAL REPORT

By JACK McARTHUR

"I've got the Asian flu."

A swelling chorus of voices repeating these words rings in the ears of Canadian office managers, personnel directors, school teachers and medical men.

It means operation on short staff for business and industry, overtime work for the healthy, slimming school attendance, busy days — and nights—for harried doctors.

There is little pattern to Canada's battle with Asian flu.

An **FP** survey reveals some hope on the Prairies that the worst is over; fear in Quebec that the worst is yet to come; indecision in Ontario over the future flu course; very little flu in British Columbia or the Maritimes.

Larger employers report up to 40% of their staff laid low.

But this is the rare exception. Even in the toughest flu areas of Ontario and Quebec, the percentage rarely tops 20% at any given moment.

Absenteeism

The national absentee average looks between 5% and 10%.

It's considerably higher in the schools — possibly twice as high.

A scattering of schools have been closed. Some others are open but with the student body reduced by 33% or more.

Flu isn't causing important layoffs in industry, although it could do so if it becomes more serious.

It is causing a boom for temporary manpower pools—companies which "rent" labor to offices and industry for varying (usually short) periods of time.

But most business is carrying on almost as usual.

Healthy employees are doing extra work left behind by flu-sufferers.

What can business do to minimize flu effects?

It can:

- **Arrange vaccination** for key personnel.
- **Decide ahead of time**, on a planned basis, how each department will handle the extra load if flu cuts into the work force.
- **Decide whether part-time help** should be brought in; find out where to get it.
- **Make sure employees** know the symptoms and recommended treatment.

A lot of cases probably aren't Asian flu at all.

Bad Colds

Many are bad colds or cases of common influenza.

Because of the Asian scare, Canadians who catch anything that has similar symptoms are much more inclined to stay home than ordinarily.

And, say doctors, this is the wise course.

Asian flu is impossible to diagnose exactly, barring a laboratory test. Yet it should get careful treatment. Anyone who thinks he might have Asian flu is best advised to play it safe.

Adding to absentee troubles is the minority that develops "duck hunting fever" and tells the boss it's Asian flu.

Estimates of deaths attributable to Asian flu are unreliable.

They range as high as 40.

Almost all these are pneumonia fatalities. And the pneumonia followed some kind of flu-like malady which **might** have been Asian.

About half the Asian-attributed deaths have been in Ontario, most of the remainder in Quebec.

Here are the results of an **FP** coast-to-coast survey:

Vancouver

Asian flu—if that's what it is—is only now reaching British Columbia.

Doctors are not even sure that it is anything more than a severe outbreak of "ordinary" influenza.

There is a high rate of absenteeism in the schools—about 10%.

Large employers in Vancouver and district report no marked increase in absenteeism. One company said it had noticed an increase—"but it's probably because the duck and pheasant hunting season has opened."

No one has died in B. C. No schools have been closed. One hospital has suspended visiting privileges.

* * *

Thousands of persons in Alberta have been stricken with so-called Asian flu during recent weeks.

Edmonton

The opinion of health officials is that the peak has passed. So far, four deaths have been ascribed to pneumonia that followed the flu.

Retail Merchants Association of Alberta said that while staffs had been depleted, there were no indications that the flu had slowed retail business.

One of the hardest hit was the Unemployment Insurance Commission in Edmonton, which had nearly 40% of its staff away on one day recently.

Other federal and provincial government staffs also were seriously affected.

"There has been little or no hiring of extra staff because of absenteeism caused by flu," said an official of one large service agency.

"Firms are 'getting by' through those who are well doing extra work for those who are away."

At the big **Northwest Industries** plant, employing nearly 1,000 persons, officials reported that many employees had been ill with flu, but the company was maintaining full operations.

Officials of the city health department reported the epidemic definitely on the wane.

Nevertheless, fresh supplies of vaccine have arrived, in case of emergency.

Winnipeg

Not many workers affected in Manitoba.

Some medical authorities say it may become worse simply because up to mid-October it had been comparatively light. In far northern parts of the province however it is quite severe.

In northern centres absenteeism runs up to 20% - 30%.

In Winnipeg flu has most evidenced itself in the schools. None have closed but in some cases for a period of a few days attendance has been reduced as much as 30%.

Among Winnipeg adults it has caused little inconvenience. Large employers, the railway offices, the provincial civil service, large stores such as **T. Eaton Co.** and **Hudson's Bay Co.**, all report the rate of absenteeism as normal for this time of year.

In one or two places it's perhaps slightly higher, but not serious.

Much the same conditions are reported from Brandon and Portage la Prairie.

Manitoba's supplies of vaccine may not be more than sufficient to take care of the initial priority list if the disease becomes genuinely epidemic within the next few weeks.

So far the province has received 2,500 portions from federal laboratories. These have been distributed to the first priority group, medical and nursing staffs of hospitals.

Health minister R. W. Bend has been told by Ottawa that 27,000 portions will arrive by mid-November.

The priority list prescribed by federal health authorities in addition to hospital personnel, includes workers in essential services, fire and police departments, waterworks staffs, persons employed in communications, and

(Continued on page 26)

SAYS FP'S SCIENCE EDITOR:

This Flu Epidemic Might Have Originated in Cosmic Space

By LEONARD BERTIN

Did the flu epidemic which is now sweeping the western world originate in Asia or in cosmic space?

Serious scientists are asking this question today.

The answer is probably cosmic space.

Did the flu virus cross the great cold void from Venus or Mars or some planet of a foreign sun?

Certainly not. The germs themselves have been with us all the time.

They existed in the forms of the viruses — microscopic crystalline organisms—that cause the types of flu with which we are already familiar.

The rest of the story is probably one of evolution —a small-scale parallel to the process by which man himself has gradually evolved from duckweed and, maybe, millions of years ago, even from a virus.

Many Agents

The agents that can bring about these hereditary changes are many and extremely varied in kind.

There are a number of chemicals, for example, that affect the germ cells.

One of the most effective in this respect, in laboratory experiments, is dichlor - ethyl - sulphide, known to World War I veterans as the dreaded Mustard Gas.

X-rays can do so, too, and even the rays given out by a luminous watch dial or from atom bomb debris.

There are radioactive substances within our own bodies, substances like radio potassium, that are very potent.

Others exist in rocks and in the masonry used to build our homes.

One of the most prolific sources of all is in the cosmic rays that shower down on us continually, day and night, from outer space.

In spite of the varied nature of all these agents, the changes they provoke are identical and indistinguishable.

Yet an agent of this sort is almost certainly responsible for changing one of the myriad viruses at large in the world into a new form that the defenses of the body were unprepared for.

That is why I said, earlier, that it will be difficult ever to discover where the new virus began.

All we have to go on now are a lot of bugs that are already many generations removed from the original progenitor.

Changes of this sort are happening, of course, all the time. The scientists call them "mutations."

Mutated Forms

Many of these mutated forms are weaker than their fellows and fail to survive. Many are incapable of reproduction and we see no more of them.

Every now and again, however, nature comes up with the jackpot — a new variety that is destined to make history.

I have good cause to remember one of these mutations. It cut short a visit to Sicily.

It took the form of a common house fly. Or perhaps "common" is not the word.

I could not make it out at first. Palermo, on the north-west coast of this Mediterranean island, one of its largest cities, was completely infested with flies.

This fact would not have been so remarkable if every house and other building in the island had not borne the inscriptions painted there by UNRRA health teams indicating that they had only recently been given a routine spray of DDT.

Also, there had been none of these flies elsewhere in the island, and there were certainly no mosquitoes — eloquent evidence of the effectiveness of the spray.

Bit Like Blazes

There was another difference. Sicilian flies do not usually bite. They just buzz round your head and annoy you. These flies bit like the very devil.

Plagued, day and night, by these beasts, I eventually sought out the local medical health officer, quite expecting to get chucked out on my neck, but wanting to satisfy my curiosity.

He received me, instead, with open arms.

"Le mie mosche (my flies)," he exclaimed, with an air of ownership and pride, tinged with ruefulness.

He went on to tell me of an exciting discovery that paralleled experiences of germ immunity to penicillin.

"His flies," he explained, could not live without DDT. They would have disappeared almost at once if the anti-malarial drive had been suspended.

They literally depended on DDT for their existence.

Because of many mutations in the fly population due to cosmic rays, radioactivity from rocks and the air and a variety of other causes, the Italian doctor explained, there were many different types.

No Match

Among them was his own particular variety, one that in spite of its vicious bite that made life for human beings unbearable, was still no match for its fellows in the normal run of daily life.

This type of fly never managed to survive in

(Continued on page 26)

ANNOUNCEMENT

COMMONWEALTH CONSTRUCTION COMPANY LIMITED

R. H. ANSLEY

RALPH C. PYBUS, President and General Manager of COMMONWEALTH CONSTRUCTION COMPANY, LIMITED is pleased to announce the appointment of R. H. ANSLEY as Pacific Manager and Director. Mr. Ansley formerly held the position of Assistant Pacific Manager and Director.

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How Badly Has Flu Crippled Canada?

AN FP SPECIAL REPORT

(CONTINUED FROM P. 25)

elderly persons in institutions.

Toronto

There is considerable disagreement among medical men over whether the flu will get worse.

Some contend that the typical flu pattern is wave-like. It becomes serious, subsides somewhat, then again strikes hard. On this basis they fear that the first few months of 1958 will see the flu bug make even larger inroads into the labor force.

Others think the worst is over, point out that children have been hardest hit, many adults have resisted the virus.

Office Overload Ltd., large personnel pool, says demand for its services are increasing steadily.

Incoming orders for temporary office help have doubled during the flu period. Average absentee rate looks to be 10%-15%. Estimates of 30%-35% seem exaggerated, though they may be correct for smaller offices.

Ford of Canada, with employees in Windsor, Oakville and Toronto, hasn't been hard hit.

National Employment Service says the disease has had relatively little effect in its Toronto offices, doesn't seem to be slicing work forces elsewhere to the point where forced layoffs occur.

A large printing plant has bottles of disinfectant beside each telephone. 'Phone-users wipe off the mouthpiece after use.

Hospitals in Ontario are reducing the number of visitors—either on a voluntary or compulsory basis.

School population is away down, with absenteeism ranging to 90%. Some schools have been closed but there's little evidence that this reduces flu incidence.

One class in a Toronto suburb was cut from 35 to two. Remnants of three classes had to be combined to give the teacher a modest-sized audience.

Toronto Transit Commission is asking public patience, explains its staff is badly hit, men are working long overtime hours, schedules are difficult to meet.

Toronto Maple Leaf hockey fans are flu-conscious. The team trained in the epidemic-struck Sudbury area and has been crippled ever since because of absentees.

The Leafs lost their first two games.

On the Big Four football front, the worst of the flu seems over.

Much essential personnel have been vaccinated. So have some others. Office Overload, for instance, is making free vaccine available to 1,000 of its temporary staff.

Montreal

The flu bugs are concentrating in the northern part of Quebec. Provincial health authorities told **FP** that in northern towns flu had affected some 35% of the population; and that the outbreak had not yet reached its peak.

Arrivals from Europe some weeks ago may have brought the virus.

Montreal is now bucking a 10%-15% flu outbreak, but authorities fear it will reach 35%-40% by the last week in October.

A week or two later Quebec City and district should succumb—making the invasion complete.

Immunization of essential personnel is now finished. All doctors, nurses, firemen, police, etc., have had their shots —or at least have been offered them.

It is too early to say yet how flu will affect Quebec business and industry. A number of major employers in the province reported to **FP** that their absentee figures were in line with the provincial average.

There were some exceptions. **Canadair Limited**, for instance, reported at the close of last week absenteeism through illness was 65% above normal for this time of year. Company doctors blamed this entirely on flu, were predicting worse times ahead.

The railways and **TCA** reported no serious flu problems as yet, but here again there are predictions of trouble in coming weeks.

All Montreal hospitals have asked visitors to stay away wherever possible. It's expected that when the flu arrives in force, visiting will be stopped altogether.

Fredericton

New Brunswick health officials have their fingers crossed.

Asian flu has had little impact in the province. They are hoping it stays that way. As of late last week there had been no proven cases of Asian flu.

Suspected flu has closed a school in Sackville. The provincial public works department reports no more absenteeism than usual.

A big construction firm, however, says about 10% of its workers are away. A variety store has seven or eight away out of 100; a large hardware operation is missing six or seven out of 100.

The New Brunswick Power Commission reports the situation as "normal."

Halifax

Medical officials continue to prepare for an expected flu onslaught. By last weekend the Asian virus still hadn't appeared in Nova Scotia.

"If it follows its natural course we will have an invasion—it may be starting now," said Dr. J. S. Robertson, deputy minister of health.

But only one known case had been revealed through provincial laboratory tests—this through two washings from 11 specimens taken from flu victims aboard the liner Vulcania which docked here several weeks ago.

Influenza, although not known to be of the Asian variety, has hit several hundred Sydney school children—but no thought was given to closing the schools—and forced two Glace Bay hospitals to ban visitors.

Industry and business have felt the impact of normal flu incidence only, not sufficient to cause any alarm.

Provincial officials have already received 2,000 ccs of influenza vaccine, Asian type, and expect close to 20,000 ccs by mid-November to carry out an innoculation of priority personnel.

St. John's

It's not yet fully established whether it is Asian flu or not that is at near-epidemic heights in St. John's.

The number of absent school children and employees at business houses in the city appears to be growing each day.

One store reports about 25 absent each day out of 330 employees. The personnel manager said workers come to the office, become weak and ask to be sent home.

Another St. John's store said it has an average of 10 employees off every day and the figure is rising.

Schools are hard hit.

One school official said all cases of absenteeism can not be directly attributed to flu, either the Asian variety or common flu. Many who are staying out of school with perhaps nothing more than a bad cold are jumping to the conclusion that they have flu.

St. Bonaventure's College reported 240 absent late last week, up from 170 four days earlier.

St. Michael's School reports about one third of the student body away. There were 386 absent Oct. 10.

Prince of Wales College has more than 300 absent of a student body of 722.

Two schools in St. John's have closed temporarily.

ANNOUNCEMENT

Southern Canada Power Appointments

E. L. JOWETT H. A. LADOUCEUR

Mr. J. A. Pagé, president and general manager of Southern Canada Power Company Limited announces the appointment of Mr. E. L. Jowett, C.A. (left) as treasurer of the company succeeding Mr. T. Irving retiring, and of Mr. H. A. Ladouceur, C.A., as assistant-treasurer. Mr. Jowett has been with the company 15 years as assistant-treasurer, and Mr. Ladouceur joined the company in 1951.

● THE BUSINESS CLIMATE

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Flu Originated In Cosmic Space

(CONTINUED FROM P. 25)

competition with the rest of the fly population. But nature had bestowed on it one tremendous advantage over its fellows.

It could metabolize DDT. That is to say, it could absorb this powerful killer into its system without suffering any apparent harm.

Its heyday came when UNRRA started its anti-malarial campaign.

All the other flies succumbed and, in accordance with the laws of nature, the one type of fly that was left soon multiplied fast enough to replace the whole of the normal fly population!

I told the story to demonstrate what a mutation can do.

The parallel with Asian flu must not be carried too far.

There is no evidence that its present impact on our daily life is in any way connected with the fate of other forms of flu.

Its success is probably due to the fact that, because of its newness, our bodies have not yet had a chance to develop any form of immunity or protection against it.

This will follow in time, but by then nature will have produced new variations of its own.

Flu Points

FP gives you some flu points to watch:

Symptoms: Those of a serious cold.

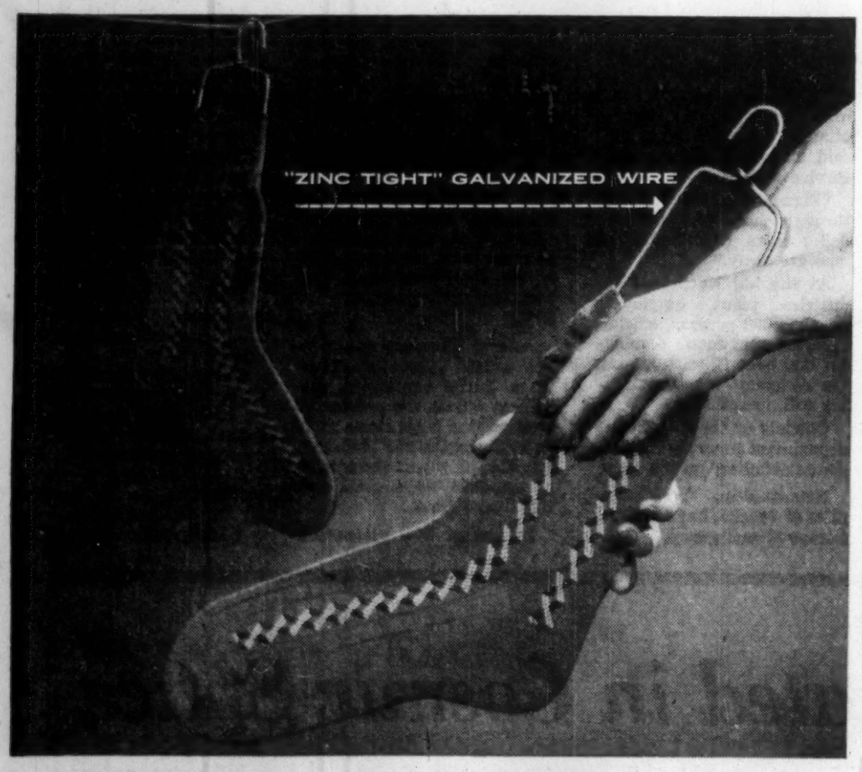
Temperature: Probably 102 to 104 deg.

Protection for yourself: Nothing much you can do apart from arming yourself beforehand by taking Asian flu vaccine.

Avoid crowds and badly ventilated places; strengthen your resistance by taking plenty of fresh air, food in moderation, fruit juices, by keeping your bowels open.

Treatment: Aspirins and other pain relievers; keep warm; drink plenty; consult your own physician; avoid chills.

Protect others by: Going straight to bed when symptoms start; covering your mouth properly when you sneeze or cough; personal cleanliness.



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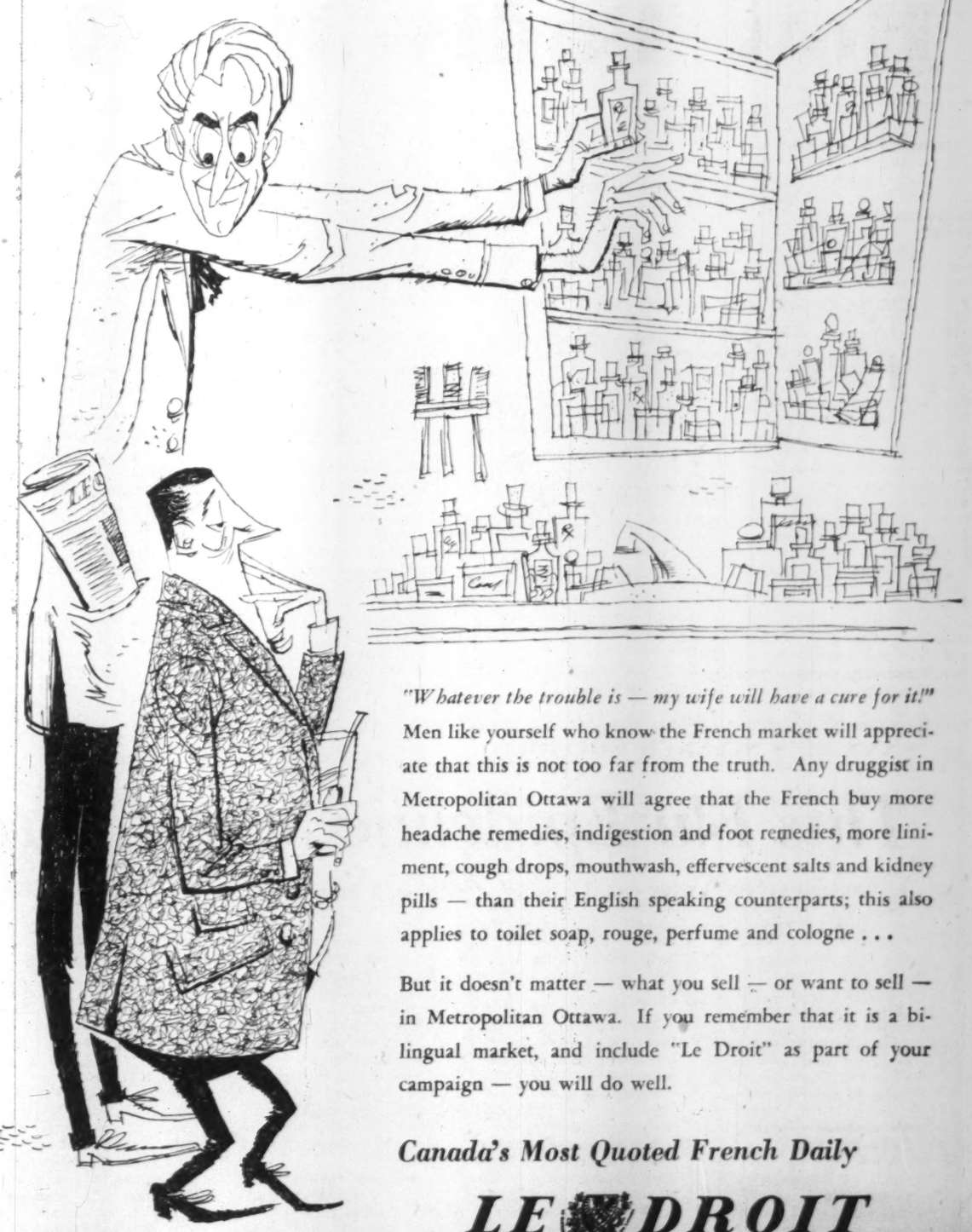
"Peu importe le bobo—ma femme aura bien un remède"



"Whatever the trouble is — my wife will have a cure for it!" Men like yourself who know the French market will appreciate that this is not too far from the truth. Any druggist in Metropolitan Ottawa will agree that the French buy more headache remedies, indigestion and foot remedies, more liniment, cough drops, mouthwash, effervescent salts and kidney pills — than their English speaking counterparts; this also applies to toilet soap, rouge, perfume and cologne . . .

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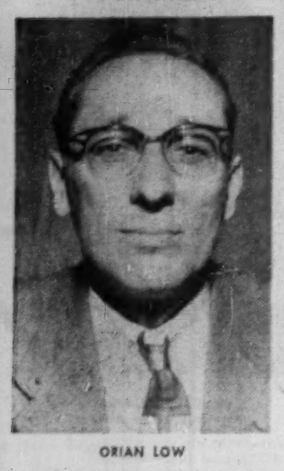
ANNOUNCEMENT

OTTAWA GAS APPOINTMENT



ORIAN LOW

Orian E. B. Low, B.A., Q.C., has been appointed to the Executive Board of Ottawa Gas. Mr. Low is senior partner of the law firm Low, Honeywell & Murchison, president and director of Corpus Management Ltd., vice-president and director of Kent Investment Co. Ltd. and Lawrence Supplies Ltd. and an officer and director of several other companies. A graduate of Queen's University, he was for many years an Ottawa Public School Trustee and its youngest chairman. He has been president of the Ottawa Junior Board of Trade and from 1942 to 1946 was general counsel and secretary of the Commodity Prices Stabilization Corporation Ltd. A member of the Kiwanis, Canadian and Laurentian Clubs, he is Honorary Secretary-Treasurer of the latter organization.

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ENGINEERING TASK

Why, How They Moved A Bridge Downstream

By B. H. HAGERMAN

The moving of the five 192-ft. steel spans which make up New Brunswick's Andover Bridge was a fascinating engineering problem.

This bridge was built in 1902-1903 over the Saint John river, joining the town of Perth on the east bank with Andover on the west.

It crosses the river at a point 115 miles from Fredericton. A new structure, replacing this old one, is under construction.

This new bridge, which has its centre line of roadway seven feet downstream from the old one, will be part of the Trans-Canada Highway.

Due to the age, width and over stressing of the old steel spans, it was desirable that a new bridge should be constructed as soon as possible, either on the same site or not more than 100 feet downriver.

The granite masonry piers and abutments, supporting the steel spans were examined and found in good condition and capable of doing service for many years to come. It was decided that, if at all practical, the existing substructure should be used.

We were faced with two alternatives:

- To rebuild on approximately the same site, using existing granite supports with new concrete additions downstream, to provide for the extra width of new spans.
- To build an entirely new bridge at a distance of 80 feet downstream.

Several factors influenced our decision to adopt the first.

Adding 14 feet of concrete to the downstream end of each pier, rather than constructing entirely new ones, would save considerable in materials and time.

An argument against building on the same site was the difficulty of providing a temporary bridge for traffic during the construction of the new one.

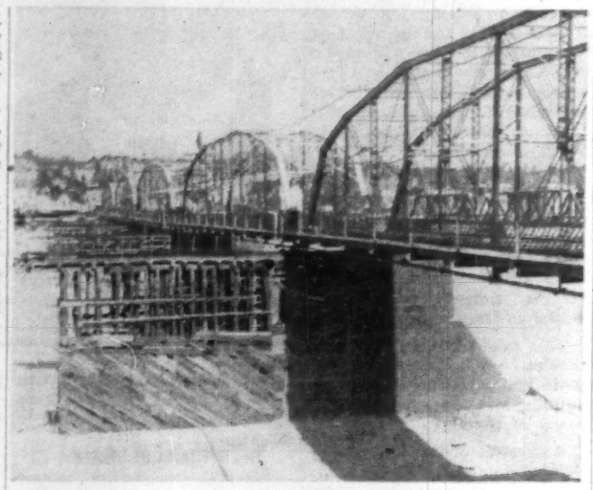
This, however, could be accomplished by moving the old spans downstream over and beyond the new pier additions a sufficient distance to clear all new work.

We realized that moving these spans, without interrupting traffic for any length of time, would be difficult and that everything would depend on the success of this out-of-the-ordinary operation.

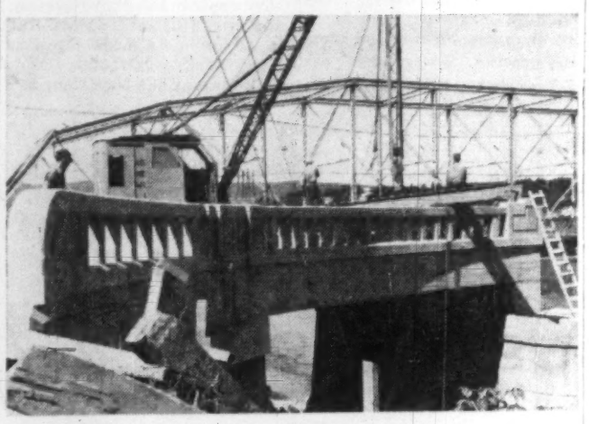
We decided to try the moving job.

Approaches

The roads approaching the bridge run up and down river along each riverbank; and in order to make satisfactory entrances to the bridge, it was necessary to plan for a reinforced concrete slab at each extreme end of the structure.



TEMPORARY supports held the Perth-Andover bridge, during the operation which moved it 75 ft. to a Trans-Canada Highway location.



NEW CONCRETE approach was ready when workers began shifting the bridge itself.

These approach spans would provide space to curve the roadways entering the bridge from both up and down river.

Work was started June 15, 1956.

The driving of a pile trestle was started out from the Andover (west) side of the river downstream from the bridge. On July 1, a similar trestle was started from the Perth side.

Work on the pier extensions was carried on from the trestles. The two shore piers were constructed directly from the riverbanks.

When concrete extension work on the piers was well above water, long piles were driven in clusters extending down river the required distance from each pier. Each group of piles would provide support for rails on which the existing steel spans would be moved; and a downriver portion of the pile group would act as a temporary pier to support the spans while they carried the traffic.

As soon as pile-driving was complete, derricks and other equipment were moved back toward the shores and the trestles taken down behind them.

While this work around the piers had been going on, ice had formed in the river of sufficient thickness to support workmen and some types of equipment.

However, just before reaching the shore with the trestle-dismantling operations, we had a few days of rain, which resulted in an ice run.

This movement of ice was severe enough to break off several piles in the west trestle, and the derrick had to be moved ashore — in a hurry.

However, no serious damage was done. The removal of both trestles was completed just before Christmas, 1956.

The Next Step

After Christmas, work was resumed and by the middle of January the two shore piers were completed to the elevation planned.

The moving of the steel spans was next on the schedule. All efforts were concentrated on making preparations for this phase of the work.

The old spans were cut clear at the abutments and at the piers.

All spans were jacked, a sliding plate secured under the end bearings and rails fastened in position across the bridge seats.

These rails were extended, downriver, along the top caps of the pile piers and lined so that they would carry the ends of the spans to the final position. The top surfaces of all rails were well greased just before the move was made.

Block and tackle were assembled, sheave blocks secured to the ends of each span and to the downstream end of each pier and abutment extension.

Six hoists were set up, three on each river bank, and so arranged that one hoist on each bank pulled the shore ends of the spans and the other hoists pulled adjacent ends of spans resting on the same pier.

Steel cables were fastened to the span ends, passed through the blocks and secured to their proper hoist drums. The slack was taken out of these cables and all hoists tested on a pull before the actual move.

On the day set for moving, Feb. 13, the crew assembled early in the morning and at 9.30 a.m. traffic was stopped.

The temperature that morning registered 30-40 deg. below zero, certainly not ideal weather for such an operation.

Everything contained frost and was brittle.

A thin haze settled over the river, making it difficult to see from shore to shore.

In spite of the weather a large crowd of spectators had turned out to witness the moving of the 54-year-old bridge.

The signal was given, engines started and the spans began to move.

Once started, the bridge slid along easily although at times some spans were ahead of others. A few stops and adjustments had to be made but about 11 a.m. the whole bridge had been moved down river approximately 50 feet.

B. H. Hagerman is bridge engineer with the N. B. department of public works.

The centre span was left in this position parallel to its original line. The other four spans (two at each end of the centre one) were moved beyond this, to their final positions, and when stopped the whole bridge formed an arc with extreme ends at distances of 75 feet downstream.

This alignment was necessary in order that these extreme ends of the old bridge would not interfere with the construction of the widened ends of the new concrete approach spans.

The Job Done

The previously prepared approaches were now connected up to the bridge in its new position, adjustments made between spans on the piers and at 1 p.m. after an interruption of three and one-half hours, the structure was opened to traffic again.

The old bridge has been functioning since and, resting on its temporary pile piers, it withstood the ice run this spring with no ill effects—in spite of doubts expressed by pessimists.

It is anticipated that the new bridge will be in operation this coming winter.

Two Firms Back Grey Cup TV Show

Television rights for the Grey Cup Game, Nov. 30, have been bought from **Molson's Brewery** by **Shell Oil Co. of Canada** and **Goodyear Tire & Rubber Co. of Canada.** The rights cover all Canada except for Quebec.

This is the first time that Goodyear has sponsored Canadian football on TV. For Shell, the broadcast will climax the company's biggest expenditure on Canadian television.

It is expected that the game will be seen live on each of the 33 TV stations. Kinescopes will bring the total audience to an estimated seven million viewers.

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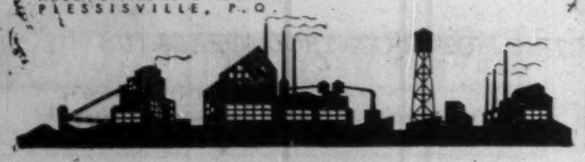

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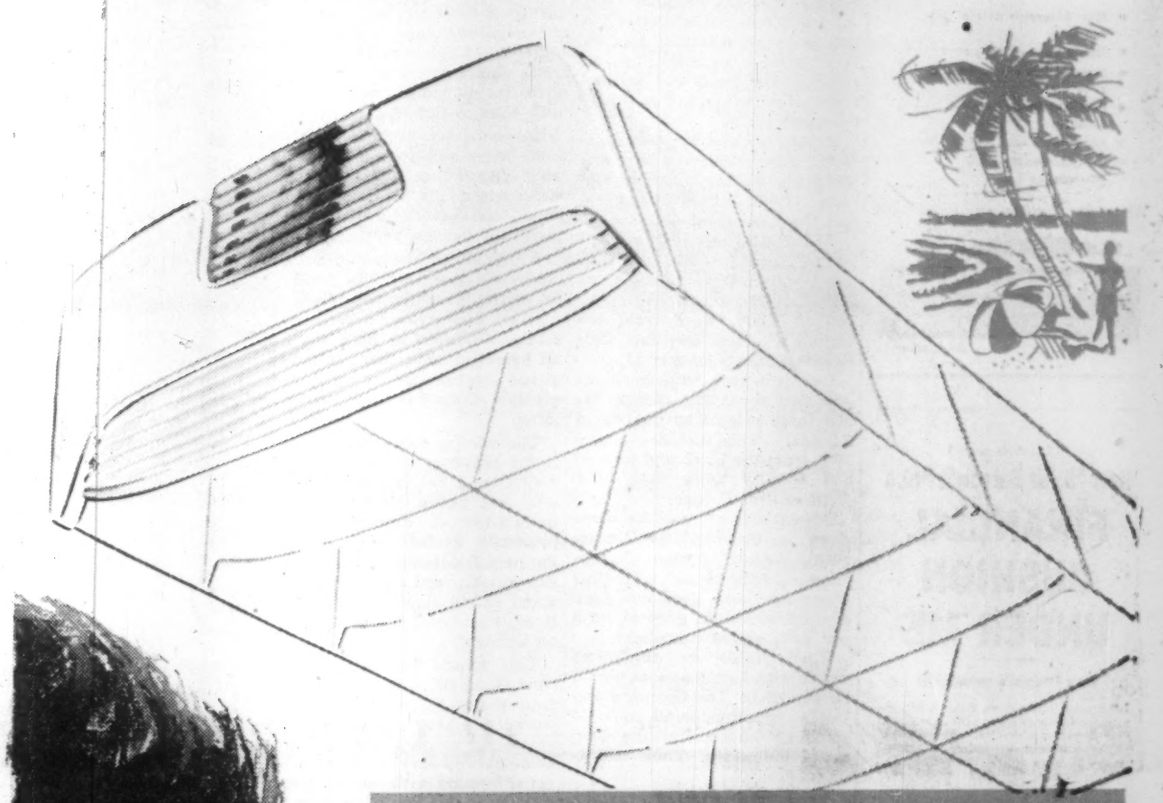

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It is a scientific development in which the colour is actually fused into the polystyrene (not painted on) to give proper light value for new levels of seeing comfort. This translucent tint is primarily functional but architects, illuminating engineers, interior decorators—and management—are already very enthusiastic about its decorative, atmospheric qualities. If you are now in the process of specifying—or ordering—lighting fixtures we suggest you see Lumilux-G before you do.

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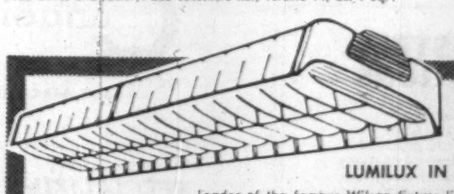

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How Do Immigrants Fare Once They Settle Down?

Since the war, over a million immigrants have come to this country.

How are they making out?

No one really knows. There has been no comprehensive study of the integration of the "New Canadian."

However, there is an account of the 20,000 who've settled in the Sudbury district.

Here's a digest of a unique survey by L. W. Luke, secretary-manager of the Sudbury and District Chamber of Commerce:

Sudbury is the 18th city in Canada and has 48,000 people within the city and a total population of 120,000 in our trading area.

We have a very cosmopolitan population which is one third of English-speaking origin, one third of French-speaking origin and one third central European. In Sudbury more than 30 racial groups have lived and worked together in peace and harmony for many years.

During the past 10 years some 40,000 New Canadians have entered the Sudbury district and about 15,000 to 20,000 have settled there permanently.

Of those, some 9,000 have applied for, and received, Canadian citizenship during this period, while some 10%, or 1,500 to 2,000, were from the United Kingdom and thus were British subjects on arrival.

Our principal employers report that about 25% of their labor force originated outside of Canada. This includes nearly 10% from the U. K. and Ireland and slightly more than 15% from central Europe.

About 40% of these have arrived in the Sudbury district within the past 10 years. As employees, experience with this group has been good and they are considered, in general, on a par with native Canadians.

Their value as employees varies with their races, as would be expected. The Germans and Dutch are considered as outstanding workers in the base metal industries. Their educational qualifications are usually good and they are safety conscious. Frequently, the Germans and Poles have a working knowledge of English on arrival.

Steady Workers

New Canadians are steady laborers and absenteeism is low. Also, they have few grievances and usually are not troublemakers. Their job turnover ratio is average for the district.

These attributes are due to their strong desire to establish themselves here, which they often do from nothing, to achieve some measure of security and to become Canadians. However, after a few years their productivity is no greater than that of native Canadians.

Skilled tradesmen and skilled labor from the United Kingdom and from Germany are quickly absorbed and are considered tops—it being conceded that trade apprenticeship in those countries produces better results than in Canada.

However, the technical men from these countries have not been outstanding, and management has found it difficult to make successful leaders of them, for various reasons.

While all with whom I have conferred agreed that the greatest attributes of the New Canadian are honesty and a desire to establish himself by hard work, all agree, as well, that the language barrier is by far the greatest obstacle in their assimilation.

The mining, smelting and refining industry in the Sudbury district will not employ anyone who has not a good working knowledge of English. This, primarily, is for the safety of the person concerned. Unless he can quickly and clearly understand safety signs and instructions, he almost inevitably has an accident.

This means that almost all New Canadians, except those from the U. K., must find other work for a year or more before obtaining employment in our principal industry; such work is usually found with construction, railway or logging companies.

Language Barrier

Language is the major obstacle in the assimilation of New Canadians and I earnestly recommend to the Department of Citizenship and Immigration that they explore every possibility of overcoming this problem, if they have not done so already.

One wonders if the department could not set up schools or classes to teach English or French in those European centres which provide us with most of our immigrants. It would appear that this would be the least expensive and most expedient way of enabling Canada to take full advantage of the work potential of those people who plan to settle here.

This problem of langauge cannot be overemphasized—and it is a recurrent one. During 1950, and shortly after, when the principal employers of the Sudbury District were rapidly expanding their labor force, some men without a knowledge of English were employed.

They were placed under a foreman who spoke their language, in yard gangs on the surface. That was five or more years ago. They still do not know how to speak English; there is no particular incentive for them to learn, and they have created other problems.

Not only is their accident frequency higher than average but, with the seniority they have now built up, they have to be transferred to other parts of the plant as opportunity arises, whether they are suitable or not, due to union requirements.

In their new work they no longer have the guidance of the foremen who spoke their language and an impossible situation occurs.

Had these men not been given a job with the company before they learned to speak English, they probably would have mastered the language in the usual year or so — now they never will. I repeat, language is the only real problem.

We have considered the acceptance, or evaluation, of the New Canadian, in the Sudbury district, as an employee. Now let us have a look at him as a citizen.

Good Citizens

Here he has not presented any particular problem — and is a good citizen.

—His outstanding characteristic, that of establishing himself, has led him to acquire the ownership of his home more frequently than native Canadians in the Sudbury district—usually with built-in earning capacity, such as a duplex or with a basement apartment.

—He pays his taxes more promptly than the average and is sufficiently self-dependent that he is only, and then very rarely, on relief when serious illness, or other misfortune, befalls him.

—His health is generally good, but not better than native Canadians. During the period of 1946 to 1950 the incidence of tuberculosis in New Canadians in the Sudbury district was disturbingly high but, with better screening of visa applicants, this incidence has now dropped to the national average.

The incidence of crime amongst New Canadians in the Sudbury district is rated as average to above average. A small percentage of New Canadians are responsible for much of the violent crime which occurs in the district.

This might be explained although not excused, by the strife and bloodshed which has entered into the earlier life of many of them.

And what of the New Canadian's children? Their influx into the community has added some problems in education, but nothing too difficult. The usual practise has been to place children without English in lower grades for oral and reading practice. For grades 7 and 8 bracket, this integration period usually takes about two years before the pupil can keep up with the work equivalent to his age.

Brilliant Students

Whereas we found certain races being more acceptable than others for labor, all racial groups in the Sudbury district have contributed above average and even brilliant students. And in all groups a wide range of mental ability is found.

In general, the New Canadian pupil has been found to be an average, to slightly above average, pupil. Many average New Canadian pupils have better work habits than average native Canadians and thus they achieve objectives more readily.

It is a matter of great satisfaction to the residents of the Sudbury district that the integration of New Canadian children in our schools has been smooth, happy and complete.

Whether their skin is white, yellow, brown or black, whether their racial origin has been Finnish, Chinese, or Slav, they study and play in harmony with the other children. And the end product of the schools is "Canadians."

This degree of tolerance and acceptance is made possible by the fact that there has always, during our brief history, been a high percentage of New Canadians resident amongst us.

EDWARD SEEL

formerly merchandising manager, Walter Woods Ltd., Hamilton, has been elected president.

ANNOUNCEMENT

R. E. MUNRO, F.S.A.
Associate Actuary

C. A. NAYLOR, F.S.A.
Associate Actuary

M. C. PRYCE, F.S.A.
Associate Group Actuary

The London Life Insurance Company has announced new appointments for three of its actuarial officers. R. E. Munro, F.S.A., Associate Actuary, is taking over the administration of Actuarial Department activities. C. A. Naylor, F.S.A., formerly Associate Group Actuary, is now Associate Actuary, with the responsibilities formerly held by Mr. Munro. M. C. Pryce, F.S.A., Assistant Actuary, has been appointed Associate Group Actuary.

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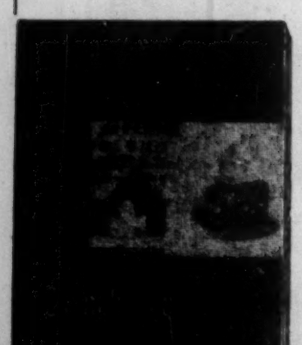

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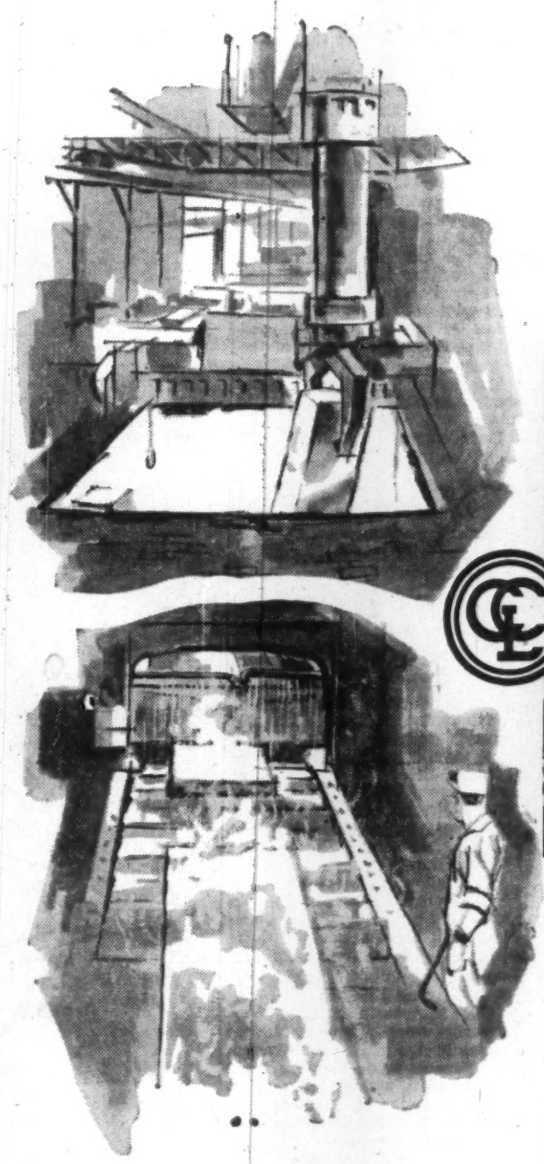
BUSINESS IS Blooming BOOMING



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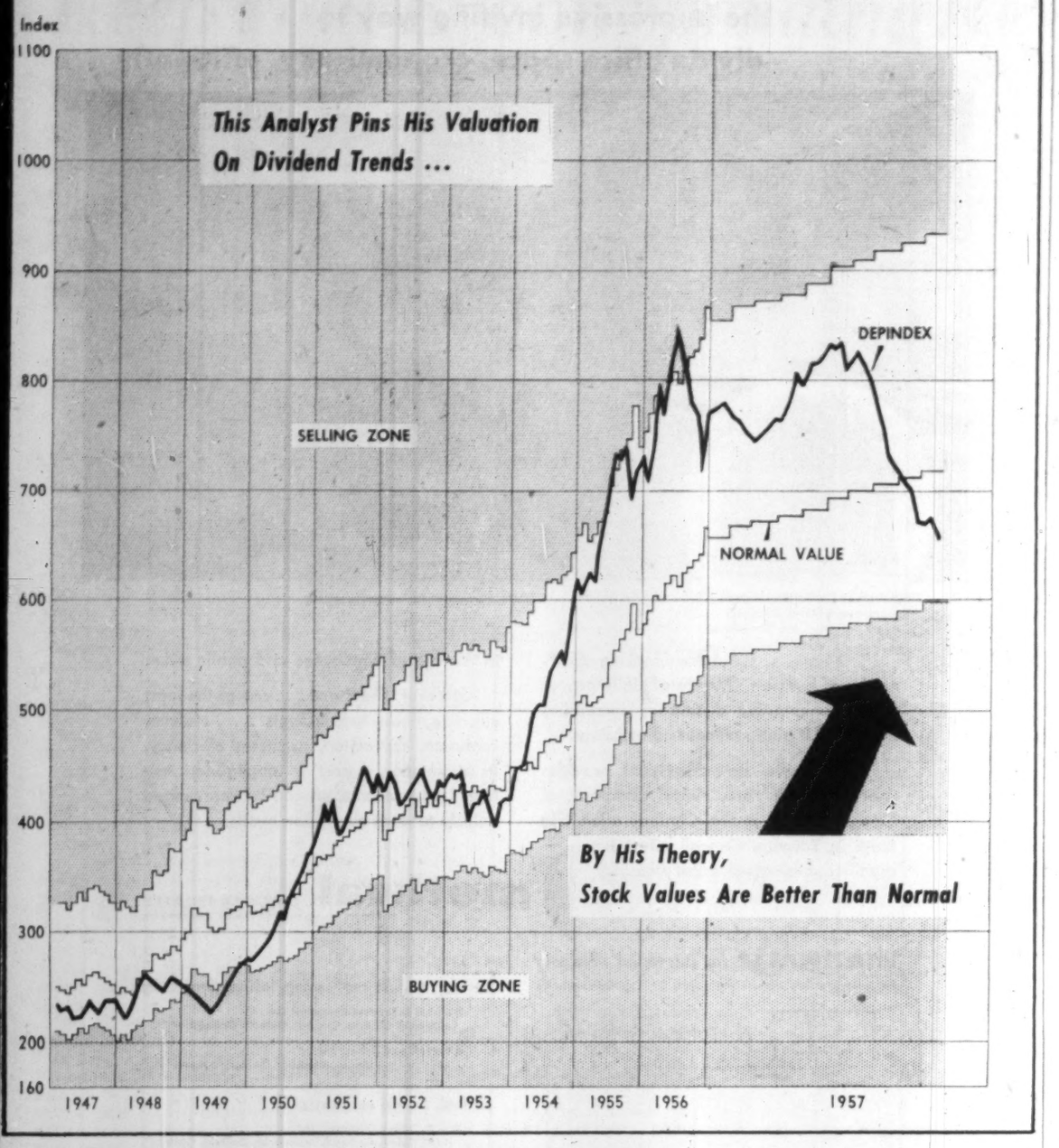
Are Stocks In A Buying Range?



How This Fund Views Market

For the first time in nearly four years, stocks are selling below their normal value.

That's the "signal" of Joseph dePencier's Investment Timing Plan. The plan determines the investment policy of the $1.5 million **Timed Investment Fund Ltd.**

What determines whether stocks are in a buying range or a selling range?

Dividends, says the Timed Investment formula.

There is a "normal" ratio of stock prices to dividends. As the market sentiment becomes optimistic, prices move higher and higher in relation to dividends, and the wise investor sells more and more of his stockholdings. But when pessimism prevails, the price-dividend ratio drops below normal and prudent investors begin buying stocks again.

That's the theory. It brings up two big questions:

—What's "normal"?

—Does the formula work?

Moving Average

The Timed Investment formula cannot be described simply, because it is not simple. Neither is it as complicated as some other market theories.

Stock prices are normal, says the theory, when they are a "normal" number of times greater than dividends.

The normal ratio of stock prices to dividends is a moving average—the ratio of the average of the prices for the last 10 years, to the average dividends of the last 10 years.

Since it is statistically and humanly impossible to determine an average of all stock prices and all dividends, the Time Investment formula settles for a representative group of 30 leading Canadian industrial stocks, which it calls the dePindex.

Both prices and annual, per-share dividends of these 30 stocks are averaged. Comparing the two averages will reveal the current price-dividend ratio.

To relate this to "normal," a moving average of the past 10 years is worked out. In other words, "normal" at any given time is the average of price-dividend ratios throughout the immediately preceding 10 years.

Here's an illustration:

In August, 1956, the average price of the dePindex for the preceding 10 years was 418. Average annual dividend paid on it was $22.30.

Ratio for the period was 418—that is, the price of 418 divided by the dividend of 22.30. It was "normal" for that time for the price of stocks to be 18.74 times the dividend.

The dividend for the 12 months up to August, 1956, was $33.28. Therefore, the normal value of the dePindex on that date was 18.74 multiplied by 33.28, which is 624.

Under the Timed Investment formula, the dePindex should have been 624 if all the stocks comprising it were selling at their normal values.

Actually, the dePindex reached 875 in August, 1956—that is, 205 points (or 40%) above normal.

The formula allows for certain swings above and below normal before it decrees that buying or selling is signaled. But when the dePindex is 130% or more of its normal, stocks are considered to be in a "selling zone." When the dePindex is 83% of normal, or less, a "buying zone" is signaled.

Today, as the accompanying chart shows, stock prices are 8.2% below normal according to the Timed Investment formula. They have not fallen so far below normal as to signal a buying zone, but—for the first time since early 1954—the average price of stocks is not above normal.

How has the formula performed for Timed Investment Fund?

At Sept. 30, 1953, when the bull market was beginning, the fund's market value consisted of about 29% bonds, 12% preferreds, and 59% commons.

By June, 1954, equities were down from 59% to 44% of the fund's assets, as the dePindex moved above normal and indicated the approach of a selling zone.

During 1955, as stock prices continued to rise until President Eisenhower suffered a heart attack Sept. 24, Timed Investment Fund was selling stocks. But Sept. 30, its stockholdings were down to 28% of assets,

Fund	Approximate Bid Mid-October 1957 $	1953 $	Inc. %
Canadian Inv.	7.84	5.77	36
Commonwealth	6.43	4.69	37
Investors Mut.	9.20	6.13	50
Mutual Income	4.36	3.21	36
Timed Investment	4.55	4.20	8

and it had earned a profit of $128,000 on sale of investments in the preceding 12 months.

In 1956, the Fund continued to sell common stocks, and earned a profit of $206,000 on their sale. By Sept. 30, however, equities represented 33% of the portfolio—due in part to a drop in value of bondholdings which reflected the decline in bond prices which continued throughout most of 1957 to date.

This year, and particularly since early summer, Timed has been increasing its stockholdings and reducing its bondholdings, as signaled by the falling dePindex.

Common stocks, which represented 37% of the portfolio's assets in mid-June, had climbed to 44% of the total by mid-September. Bondholdings were reduced from 41% to 32%.

When the fund's holdings of convertible preferred stocks are included with equities, the portfolio was then at the prescribed balance for a "normal" market — 60% common stocks and securities convertible into commons, and 40% nonconvertible fixed-income securities. The fund's managers plan to maintain this balance until the dePindex moves into either a buying or selling zone.

"Should weakness in the stock market continue," said President A. A. Walker, "we will be making further stock purchases so that we will be in a better position to share in any market recovery."

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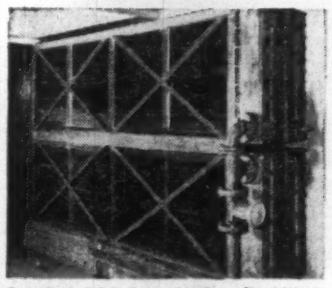

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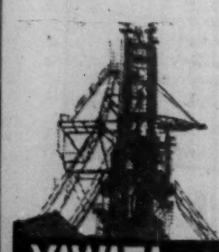

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ANNOUNCEMENT

Dow Chemical Executive Appointment

PAUL D. SCOTT

The appointment of Paul D. Scott as Assistant General Manager of Dow Chemical of Canada, Limited has been announced by LeRoy D. Smithers, President. A graduate of the University of Toronto with a B.A.Sc. degree in Chemical Engineering, Mr. Scott has been associated with Dow Chemical since the company was organized in 1942. At the time of his most recent appointment, Mr. Scott was Manager of Manufacturing and he has been a director of the company since 1956. Mr. Scott's new duties will encompass all phases of the expanding operations of Dow Chemical, including manufacturing.

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You and Your Job

This fall and winter thousands of Canadians will be looking for new jobs, for their first jobs, or critically at their old jobs. These articles tell how, when and why to look.

By WALTER LOWEN

What the Job Should Give You

This is the seventh of a series based on the book "How and When to Change Your Job Successfully," by Walter Lowen, published by Simon and Schuster, New York.)

What a job has to offer you in the way of spurs or rewards for the will to work is always an important consideration of employment. When you are thinking of changing your job, it becomes of the utmost importance.

Here are the chief elements a good job should offer. They are not and cannot be placed in any order of importance. Depending on your temperament, aims and interests they will have varying values for you and appeals to you.

The Better the Job The Less Security

A sense of security: generally speaking the better the job, the more opportunity it offers and the less security it has. This is not always true; and it sometimes can be overcome by such devices as long-term contracts. But you are not likely to be in a position to demand contracts until you have already proven your worth—and proven it, usually, by having been willing to sacrifice security for the chance to do a certain job. The less conspicuous you are, the more security you have.

Opportunities for advancement: there are two ways in which this desire can be frustrated, two stumbling blocks to advancement.

One is poor organization, or lack of interest, by the employer. Many firms are stratified. They make no effort to discover and foster new young talent. The "table of organization" never changes. New jobs are not created to take advantage of some employee's abilities; instead he must wait until some superior leaves, retires or dies.

How to Frustrate The First Rate

The second stymie to the advancement of younger men and women is the insecurity of the older supervisory employee. Many a man is horribly frustrated in his job by an unsympathetic superior who, fearful for his own job, hesitates to share his responsibilities or to train other men for the next step up.

A pleasant working environment: this is to most people a secondary consideration. For a good job, offering advancement in terms of responsibility and income, most employees will put up with anything but the most intolerable conditions.

Appreciation: in the long run, this may be the single most important thing a job should give you. Over and over again, employee surveys rank an absence of appreciation for their work as the number one gripe.

Headache Number One — The Back-stabber

A minimum of office politics: a prominent executive once said that the curse of American business is the back-stabber, the credit-grabber, the stiletto-thrower. The number of good men who change their jobs because of internal politics causes business untold loss.

Respect for your opinions: an employee is entitled to be listened to respectfully whenever he thinks he has a realistic contribution to make to the over-all good of his firm. Too many bosses still have the benighted attitude that the hired help are there to do what they're told, and not to think; that employees, like children, should be seen but not heard.

Progressive management: many an employer displays lack of vision. When the principals of a business, having made their profits, turn ultra-cautious, self-satisfied or ambitionless, and are no longer deeply concerned with progressive expansion, it shuts the door to opportunity for everyone connected with the organization.

Elements	Yes		No		Importance To Me
	Present Job	Potential Job	Present Job	Potential Job	
A Sense of Security					5
Opportunity for Advancement					1
Convenient Location					9
Pleasant Environment					2
Appreciation					4
Progressive Management					3
etc.					

To help visualize what you are getting out of your present job, what you may get from another job and, most important of all, what you really want from a job, draw up a chart like the one shown above. List elements which are important to you. Check off by "yes" or "no" if these values apply to your present job, or the job you may be seeking. In the last column, rate these qualities in order of their importance to you. When you are finished you will be able to see, by cross comparison, how the jobs stack up.

Clear-Cut Definition Of Duties Essential

Efficiency: this is a clear definition of each person's job and responsibilities. Clean-cut assignments and working schedules by-pass all the troubles of the "I didn't know I was supposed to do that" and "why don't you stay in your own department?" variety. The man who wants to do a good job can't begin to unless he knows exactly what he's supposed to do and what he is responsible for.

Identification with the whole: basically this means that your employers encourage you to feel that your job—no matter how small or peripheral—is an integral part of the over-all operation; that you have a stake in the whole project.

An acceptable social standing: social approval—or indeed, envy—of our job, is important to most of us. Because employers know this, jobs that have greater potentiality for current social approval often carry less in the way of such more tangible rewards as money. You have to make up your mind just how much this approval is worth to you.

Job Weighed Against Your Personal Life

A chance for a substantial personal life: obviously you are going to have to make concessions to your job out of your personal life. The question is: how many and how great? Will you, for example, accept a better job if it means you have to work nights, or week ends? Will you take a higher paying job that involves much out-of-town traveling, or turn it down because you'd rather see your family than make more money?

Satisfactory financial rewards: I have purposely put money last on the list of what your job should give you. I honestly believe that it is, in the final analysis, one of the least important rewards you can get from your work.

A Good Salary Can't Cure Frustration

A good salary accompanied by frustration, or unhappiness, or lack of opportunity to advance, is of no value to anyone but a miser. And he doesn't get anything out of his money except the pleasure of looking at it and feeling it. At the same time, of course, a fair rate of pay is something every job should offer you.

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(In the eighth article of this series Mr. Lowen discusses the special problems of women in business.)

Company Reports

Mining

CHROMIUM MINING & SMELTING had net profit of $1,408,692 equal to $1.23 per share in the year ended April 30, 1957, an increase of 38% from net profit of $1,021,303 equal to 89c a share the previous year.

Earnings were higher despite adverse effects of the steel industry strike last year and of losses on foreign exchange, President N. A. Timmins, Jr., says.

Foreign exchange for the previous period showed a profit of $3,513 as against a loss of $311,511 in the latest fiscal year, he says. Of this, $153,860 was incurred on funds transferred to the parent company from U.S. subsidiaries, the remainder from conversion of consolidated net current assets from U.S. to Canadian currency for accounting purposes.

Future profits are expected to be affected by taxation to a larger extent now that losses to be carried forward have been largely absorbed, Mr. Timmins says.

Operations at the chrome ore mine in Southern Rhodesia have improved and a small net profit was shown for the year.

Dollar volume of sales in the year reached an all-time high, Mr. Timmins reports. Although all products continued in good demand through the fiscal year, there has been a fall-off in demand since fiscal year-end for ferroalloys due to reduced rate of alloy and stainless operations.

However, an uptrend in this business is expected shortly, he says.

Projected long-term expansion in alloy and stainless steel production capacity, with corresponding increases in the ferroalloy industry, indicate that the company will participate in this future growth, Mr. Timmins says.

CONSOLIDATED INCOME ACCOUNT

Years Ended Apr. 30:	1957	1956
Oper. profit	$3,109,873	$2,625,886
Less: Interest & bank charges	360,763	343,770
Net oper. profit	2,749,110	2,282,116
Less: Deprec.	709,376	709,632
Pat. rts. & dev. exps. w/o	159,275	159,275
Emp. sav. & pen. fund	154,972	129,327
Bond & note int.	139,600	139,600
Can. & U. S. taxes	†177,195	†122,979
Net profit	1,408,692	1,021,303
†After credit of $498,000 in 1956, $675,000 in 1957 resulting from application of prior losses.		
Earned per Share	$1.23	$0.89
Shares o/s as at Dec. 31:		
Common, n.p.v.	1,146,650	1,146,650

CONDENSED CONS. BALANCE SHEET

As at Apr. 30:	1957	1956
Cash	$155,103	$414,288
Accts. rec.	2,570,359	2,543,419
Stores & supplies	4,426,181	3,110,091
Prod. in proc.	4,475,548	3,977,163
Total curr. assets	11,627,191	10,044,961
Notes receivable	.....	33,998
Prepaid exp.s	43,341	84,545
Inv. & advances	.....	1,500
Mine:		
Cls. dev., bldgs.	1,111,914	1,127,513
Smelter:		
Plant, equip., etc.	14,417,593	14,703,052
Research, pat., etc.*	600,610	704,202
Total assets	17,800,649	16,699,171
Due bank	5,469,548	7,082,768
Accts., etc., pay.	5,079,116	3,838,867
Income taxes pay.	206,639	215,484
Total curr. liabs.	10,755,303	11,138,117
Def. inc. taxes	75,000	.....
Note payable	2,400,000	.....
Funded debt	392,000	392,000
Capital stock	5,001,000	5,001,000
Deficit	822,654	2,231,946
†After deprec. of	4,867,185	4,435,078
*Included in curr. assets in company's report.		
*Less amount written off.		
Working capital	$71,888	‡1,093,156
‡Excess of curr. liabs. over curr. assets.		

ASCOT METALS CORP. had a net loss of $326,955 equal to 16c a share in 1956 compared with a net loss of $206,207 equal to 4c a share in 1955.

The Suffield operation was suspended half way through the year when additional ore was not discovered. In the six-month period of operation, 46,903 tons of concentrates produced revenue of $235,143.

A diamond drilling program is planned for a property at Bachelor Lake, General Manager J. M. Kilpatrick says. Several anomalies were located on the prospect during mapping and surveys.

Company's Chibougamau claims in Roy Twp. were mapped and surveys taken. Results are now being studied for possible future exploration work.

INCOME ACCOUNT

	12 mos. ended Dec. 31 1956	11 mos. ended Dec. 31 1955
Period:		
Metal prod.	$251,412	$777,704
Add: Other inc.	8,415	2,432
Less: Freight & mktg. chgs.	16,268	65,916
Gen. & admin. exp.	174,731	181,052
Mine devel.	246,006	392,557
Milling	143,996	263,858
Less: Loss on power line deposit	12,118	.....
Loss on disposal f.a.	74,113	.....
Outside explor.	29,113	82,960
Add: Prof. on sale invest.	109,563	.....
Net loss & deficit	326,955	206,207
Earned per Share	d$0.16	d$0.04
None paid.		
No. o/s shs.	2,000,000	5,101,164

QUEBEC ASCOT COPPER CORP. LTD.‡ CONDENSED BALANCE SHEET

As at Dec. 31:	1956	1955
Cash	$2,362	$33,342
Accts. rec.	123,041	188,949
Mktble. invests.*	.....	89,375
Stores & supplies	50,076	40,624
Total curr. assets	181,479	352,290
Inv. in subsid. & assoc. cos.	161,900	186,900
Prep. exps.†	9,832	6,774
Claims	107,175	210,606
Bldgs. & equip.	1,299,180	1,423,760
Preprod. & def. dev. exp.	.....	1,951,306
Deferred exp.	.....	12,982
Total assets	1,758,666	4,144,618
Accts., etc., pay.	61,569	137,053
Total curr. liabs.	61,569	137,053
Dir. adv.	109,043	103,343
Capital stock†	21,055,368	3,043,582
Earned surplus	533,686	860,640
dAfter discount of	944,632	2,657,582
*Market value	.....	255,600
‡Included in curr. assets in co.'s report.		
Working capital	119,910	215,237

‡Name changed from Ascot Metals Corp. Ltd. in Dec., 1956, and capital reorganization on basis of 1 new sh. for each 3 old shs.

Note—Reduction in value of assets in 1956 is after giving effect to write-offs for mining cls., deferred devel. and invests. & advs. to sub. and allowing for discount on shs. cancelled as a result of capital reorganization.

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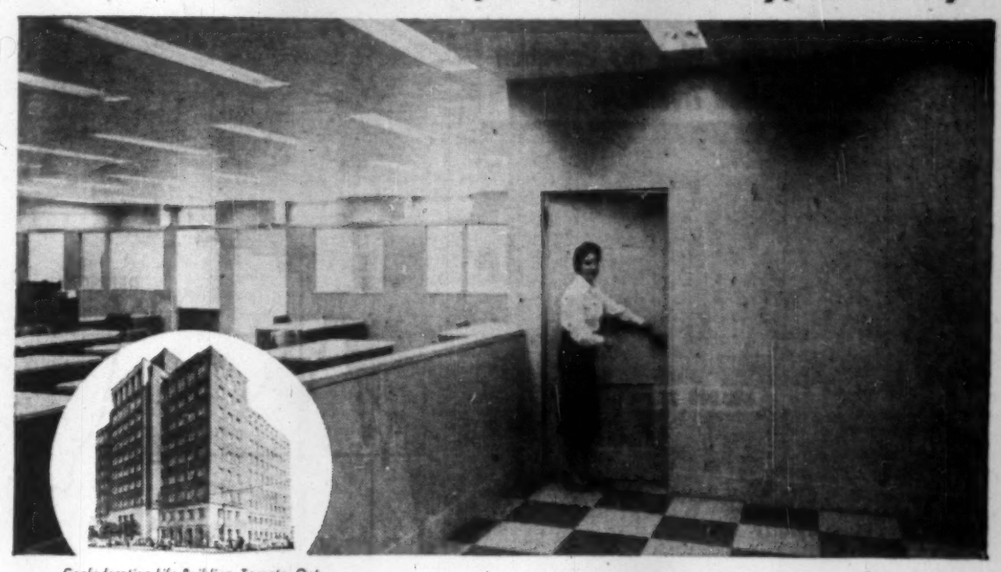

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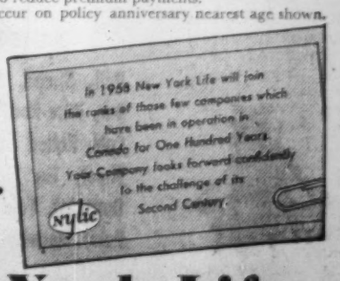

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Fight for Stable Prices

Keep Your Eye on Spending Keys

Neither inflation nor deflation is inevitable.

But the fight for stable prices calls for a careful watch over four sectors of the economy:

- Capital investment.
- Exports and imports.
- Spending by consumers.
- Government spending.

If one of these gets out of step, provision should be made in other sectors to offset its effect.

That's what J. Douglas Wahn, general economist, Canadian National Railways, told the affiliate section of the Institute of Administration in Montreal.

Here is a digest:

There seems to be general concensus that the worry about inflation has passed.

But I am one of those who believes that inflation is a Trojan Horse and I further believe that when we turn our attention from that Trojan Horse and forget about the dangers of inflation that the Trojan Horse may come to life, disgorge its hidden soldiers and overwhelm us all.

Constant vigilance is necessary in order to prevent both inflation and deflation.

What do we mean by inflation?

There are at least two definitions current at the present time. One refers to an increase in prices; the other to swollen incomes.

In general, most economists and business analysts when they refer to the term mean price inflation and quite often this represents the effect of income inflation. When I refer to inflation I shall mean a rise in prices rather than a rise in incomes.

How do we measure the degree of inflation?

In Canada during the 10-year period 1946-56, wholesale prices rose by 62% or at a compound annual rate of 5% while consumer prices during that 10-year period rose by 52% or at a compound annual rate of 4.3%.

Dropped A Third

This, of course, means that the value of money, whether measured by changes in the wholesale price level, or by changes in the consumer price level, declined by about a third during that 10-year period.

While it is undeniably true that real percapita income after direct taxes showed, so far as I can judge, an increase of about 10% during the same period, it is also true that this inflation has had rather serious implications.

Perhaps the worst feature of inflation is that it results in a capricious redistribution of purchasing power. It favors those industries and organizations whose bargaining power is strong and takes from those whose income is fixed in money terms and from those who are unorganized and who do not possess bargaining power or are moderate in their use of such power.

Not only private individuals but business and municipal corporations become, in an inflationary period, much more loath to restrict their spending if they come to expect a constant depreciation in their money holdings.

Under such conditions, the rate of turnover of money tends to accelerate and prices tend to be forced higher.

This is what the economist means when he says inflation feeds on itself.

The case against inflation may be summarized by stating that it tears apart the whole fabric of long-term contracts on which civilized life depends.

What are the causes of inflation?

Four Sources

In a recent address, Marcus Nadler, the economist for the Hanover Bank listed four main sources.

- State of world affairs has made it necessary for practically all free countries to maintain heavy military expenditures. This large-scale defense spending has been one of the more important inflationary forces during the post-war period.
- Desire of people in all countries in the western world for increased social security — for such measures as old age pensions, children's allowances and other beneficial social measures, have meant much higher levels of expenditures by respective governments.

These measures have not only been inflationary in themselves but have added to the atmosphere of security in the various countries with the result that business firms and individuals have incurred indebtedness on an unprecedented scale in order to acquire capital assets.

This substantial addition to the spending stream has also been a potent inflationary force.

- Goods were scarce relative to demand for the first decade after the Second World War.

Damage to plant and equipment in Europe was very substantial during World War II and coupled with the pent-up personal demands of North Americans and Europeans resulted in a very strong pressure for both producer and consumer goods.

The effort of "new" countries such as India, Pakistan, Egypt, Indonesia and others to rapidly increase their rate of growth has also contributed to a strong post war demand for capital goods.

- Growth and structure of population — caused by a sharp increase in the birth rate and a longer life span has heavily increased the demand for goods and services.

It is hardly surprising that with these strong demands and with national governments in charge of their own stock of currencies that the supply of money increased and that prices simultaneously moved up.

In attempting to explain the rise in wholesale prices and the consumer price index in 1955-57, some economists have resorted to a "cost-push" explanation for inflation.

Reasoning behind this is that prices have been pushed up mainly because costs — usually represented by wages — have edged up.

Regarding the importance of the rise in costs resulting in higher prices, I think that statement holds.

However, there is one condition to this, namely that the monetary conditions in the country were such that the attempts to raise prices were successful.

Under more stringent monetary conditions it is quite possible that the "cost-push" might have existed but that it would have been frustrated insofar as a rise in prices was concerned.

Watch Spending

We must watch the four main spending sectors of the economy — the consumer sector, the government sector, investment and net exports.

In each of these sectors and in all of them taken together, policies should be designed to ensure that we do not try to expand or contract expenditures too rapidly in each sector and in the economy as a whole.

We should make an attempt to ensure that total expenditures in the economy and total production march step in step so that we will have a rising level of real production consistent with the growth of population, the growth in technology and with stability in the price level.

If, for a temporary period one of the main spending sectors gets out of step, provision should be made to offset it in one of the other spending sectors.

Wise policies in Canada must be matched by wise policies abroad or a solution will be made much more difficult, if not impossible. However, I am convinced that the twin problems of depression and inflation are not beyond the wit of men to solve.

B. C. Spending Shows Stores Bright Spot

From Our Own Correspondent

VICTORIA—There was considerable decrease in per capita spending in B. C. in July, according to latest figures released by the government's bureau of economics and statistics.

Total volume of retail sales in Canada in July was ahead of the same month of 1956 by 1.5%, but in B. C. the increase was but .3%.

In B. C. decreased sales volumes were reported by these outlets: motor vehicle dealers, down 11.5%; general stores, down 2.3%; clothing stores, down 2.4%; lumber and building materials, down 1.1%; restaurants, down .5%; fuel dealers, down 12.9%.

Some types of business in B. C. experienced a better than average volume — department and variety stores, both up 11%, hardware stores, up 13.1% and drugstores, up 9.7%.

Indonesian Studies N. B. Forest Plans

From Our Own Correspondent

FREDERICTON, N.B. — An Indonesian Forest Service official, A. Hafiz, is making an extensive study of N. B.'s forestry policies.

He will work with the N. B. Forest Service in all sections of the province.

Sponsored by the Colombo Plan, the study is primarily interested in the provincial forest service organization. Also the relationship between government and private enterprise, especially pertaining to the operation of pulp and paper mills.

Mr. Hafiz said Indonesia has great forest resources which are not being utilized except for the export of the raw product. And the study emphasized the importance of industrial expansion in forestry in his country.

Increased industrialization is planned by the Indonesian government on a five-year plan basis to help offset the unfavorable balance of imports over exports, raise the living standard of the people.

U.K., U.S. Link Up For Pipeline Work

U. K. and U. S. construction interests have gone into partnership in Canada to develop substantially the capital and personal resources of the Toronto-based oil and gas pipeline firm, **The Robert B. Somerville Co.**

Somerville Co., formerly a wholly-owned subsidiary of **Robert B. Somerville Inc.**, Michigan, is issuing treasury stock to **Sir Robert McAlpine & Sons (Canada), Ltd.**, general contractors, subsidiary of the U.K. group of the same name.

Somerville, Canada is a major constructor of pipeline up to 20 in. diameter and installs a large volume of local gas distribution systems. Its operations are expected to expand considerably as a result of the new arrangement.

Principal offices will remain at 4126 Bathurst St., Downsview and a new warehouse is to be built on 16th St., in Richvale.

Ian Little of McAlpine Canada will join the Somerville organization. J. G. Godwin will continue as general construction superintendent and Clifford Bedford as office manager.

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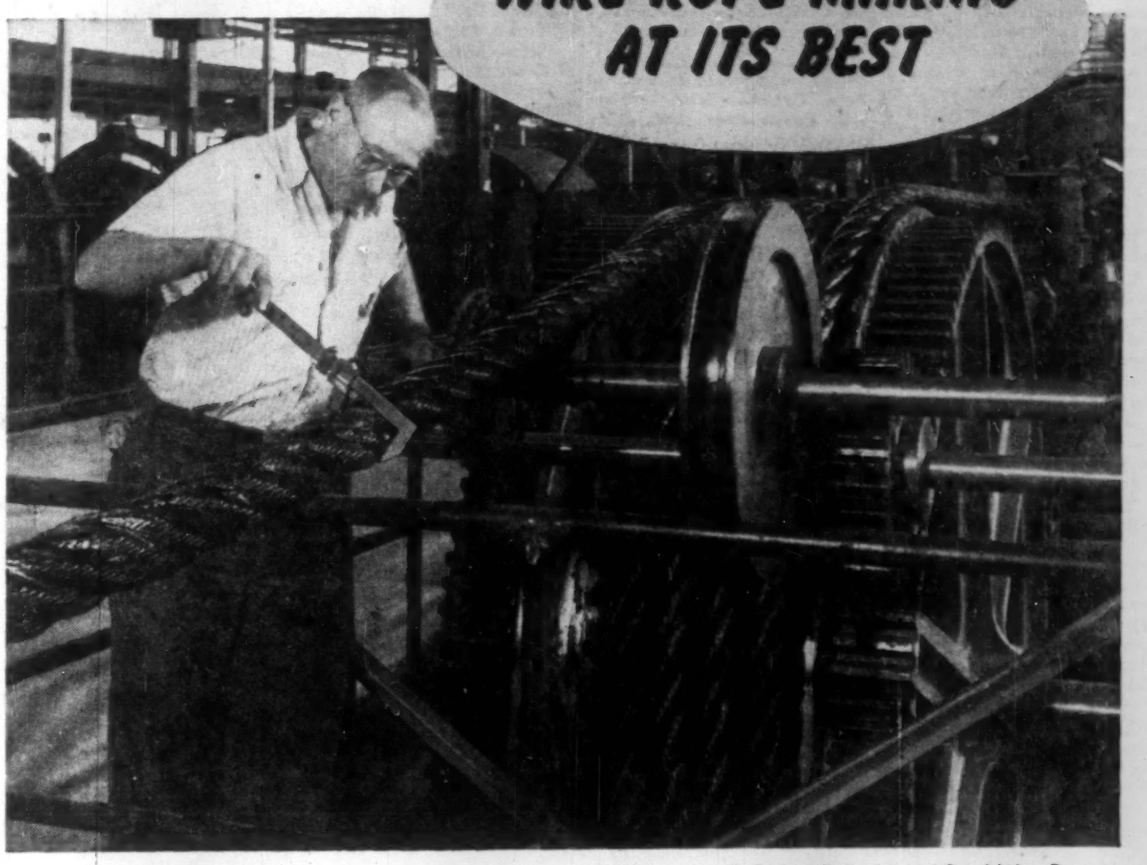
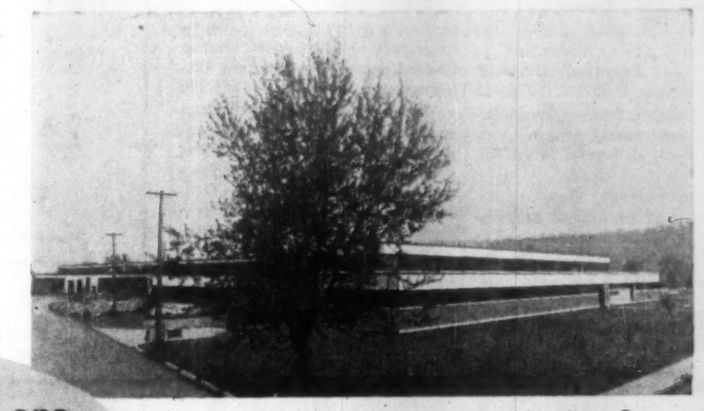
WIRE ROPE MAKING AT ITS BEST



Closing a 3½" diameter DONALD Preformed Steel Wire Rope

The new wire rope plant completed this year by Donald is equipped with the most modern machines and devices for meeting the ever increasing demands of the mining and engineering trades for larger, longer and better steel wire ropes.

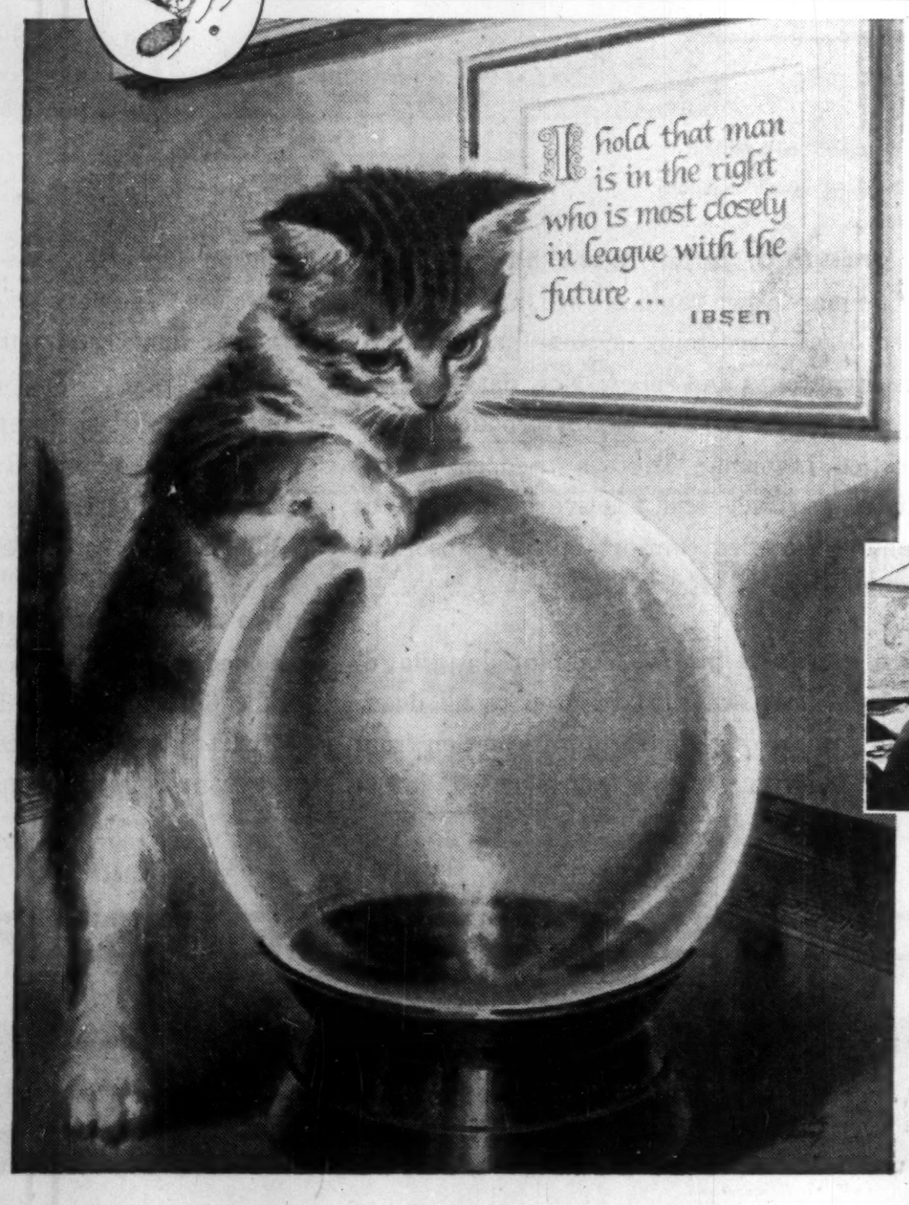


Wire Rope Division, West Hamilton, Ont.

DONALD ROPES AND WIRE CLOTH LIMITED
HAMILTON ✻ CANADA

ROUND AND FLATTENED STRAND PREFORMED WIRE ROPES

WHAT MAKES CHESSIE'S RAILROAD GROW? *One of a series telling what Chesapeake and Ohio is doing to make this a bigger, better railroad.*



Chessie's crystal ball

Everybody is interested in looking into the future. In the modern business world it is not only a matter of interest, but an economic necessity.

Long-range planning is particularly important to Chesapeake and Ohio. You don't build piers, yards, and bridges overnight. You can't pick up cars and locomotives at the hardware store. These things have to be planned and ordered years in advance.

For example, the increasing volume of coal exported through the port of Newport News has been possible because plans and decisions were made more than two years ago to enlarge C & O's coal handling facilities there. This year, more than 23,000,000 tons of export coal will move through this port, establishing an all-time record.

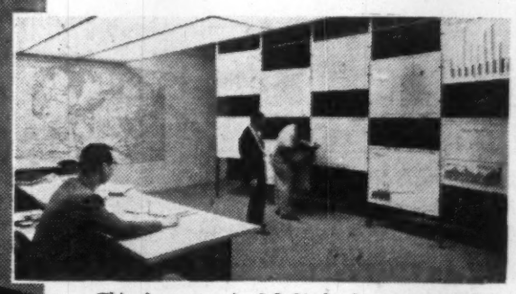
Another shipping record is in prospect this year at Toledo where Great Lakes vessels will load about 17,000,000 tons at Chesapeake and Ohio's three coal piers. Keeping "in league with the future", C & O has just started another huge pier there to handle the growing lake coal movement.

When the charts first pointed to an upward trend in ore imports, C & O blueprinted a bulk cargo pier with an eight million ton annual capacity. This new facility at Newport News has just begun operation.

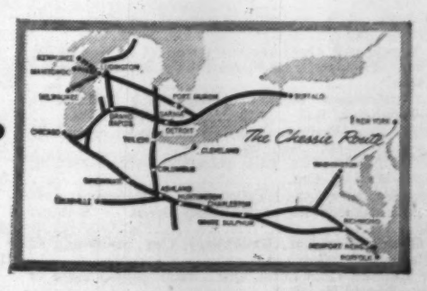
By charting trends in the great industries it serves—automobile, chemical, steel, construction, glass, paper, coal and many others—Chesapeake and Ohio anticipates their needs and provides them with the freight cars, locomotives, signal systems, tracks and yard facilities needed for the best in transportation service.

It is this same habit of thinking ahead that made C & O the first railroad to install a large scale electronic computer system. First with a system-wide, all-teletype Car Location Information Center—CLIC for short. First with the electronic hot box detector.

Thinking in tune with the future is one of the things that keeps Chessie's railroad *growing and going.*



This chart room in C & O's headquarters, called the "financial weather bureau," records daily, weekly, monthly and yearly accomplishments and projects future trends for management planning.



Would you like a Chessie portfolio of pictures — Chessie, Chessie's family, and Peake, Chessie's Old Man? Write to:

Chesapeake and Ohio Railway

3814 Terminal Tower, Cleveland 1, Ohio or
157 King Street, West Chatham, Ontario
304 Canadian Pacific Express Building, Montreal, Quebec
402 Canadian Pacific Building, Toronto 1, Ontario

New Construction, Harbor Work In $5 Million DPW Contracts

Contracts awarded by the federal department of public works in September totaled $5,228,449. Of this nearly $3 million was for new works in building construction and harbor and river engineering. $1.8 million worth of contracts were awarded for construction of Trans-Canada Highway and other roads in the national parks.

Here are the principal projects:

Curling, Nfld.—Construction of an addition and alterations to the federal building — **Provincial Constructors Ltd.**, Corner Brook, Nfld. $31,167

St. John's, Nfld.—Signal Hill Park — Construction of access road from park boundary to Cabot Tower — **Concrete Products (Newfoundland) Ltd.**, St. John's, Nfld. $99,950

Terra Nova National Park, Nfld. — Trans-Canada Highway — Grading, culverts and traffic gravel, from the park boundary in vicinity of Northwest River to Charlottetown, Nfld. and construction of access road from approximately mile 0 to mile 11 — **Concrete Products (Newfoundland) Ltd.**, St. John's, Nfld. $1,635,250

Lower Wood Harbor, N.S. — Replacement of wharf — **Kenny Construction Ltd.**, Yarmouth, N.S. $225,750

Truro, N.S. — Construction of administration building for the RCMP — **Kenny Construction Co. Ltd.**, Yarmouth, N.S. $158,500.

Westport, N.S. — Improvements to harbor—**Kenny Construction Ltd.**, Yarmouth, N.S. $201,625.

Levis, P.Q. — Extension to wharf — **Fortunat Bernard**, Bonaventure, P.Q. $79,418

Westmount, P.Q. — Construction of new postal station (Victoria) — **J. R. Loyer**, Montreal, $96,290.

Moose Factory, Ont. — Installation of municipal services and alterations to heating facilities at Indian Hospital for the Department of National Health and Welfare — **Johnson Controls Ltd.**, Toronto, $76,108.

Ottawa — Construction of addition to annealing room at Royal Canadian Mint — **Sirotek Construction Ltd.**, City View, Ont. $38,777

Winnipeg — Construction of new federal building for the Department of National Revenue (Taxation Division) — **Bird Construction Co.**, Winnipeg, Man. $1,010,605

Edmonton — Construction of new federal building for the Department of Public Works and Central Mortgage and Housing Corporation — **W. C. Wells Construction Co.**, Edmonton $563,500

Kootenay National Park, B.C. — Banff-Windermere Highway — Construction of Vermilion River Bridge at mile 25.9 — **Concrete Constructors Ltd.**, Calgary $96,614

Victoria — Construction of new workshop building for Astrophysical Observatory — **Parfitt Construction Co.**, Victoria $24,598

Victoria — Construction of new header-house for the Department of Agriculture — **M. P. Paine Co.**, Victoria, $68,968

Dawson, Y.T. — Construction of new detachment building for RCMP — **Dawson and Hall Ltd.**, Vancouver $68,611

Hay River, NWT—Construction of four semi-detached houses, one single house and one garage workshop and an addition to the teachers' quarters for the Department of Northern Affairs and National Resources — **Burns and Dutton Concrete and Construction Co.**, Edmonton $266,985

Yellowknife, NWT — Construction of various residences for the Department of Justice, Transport and Northern Affairs and National Resources — **O. I. Johnson Construction Ltd.**, Yellowknife. $215,950

Contracts were awarded for dredging as follows:

Lower Sandy Point, N.S. — **Maritime Dredging Ltd.**, Charlottetown, PEI. $18,374

Pictou Island, N.S. — **Bert McLean**, Pictou, N.S. .. $6,720

Boucherville, P.Q. —**Theode Robidoux**, Yamaska East, P.Q. $8,200.

Richelieu River, P.Q. — **St. Maurice Dredging Reg'd.**, Notre Dame de Pierreville, P.Q. $33,860

St. Barthelemy, P.Q. — **St. Maurice River Dredging Reg'd.**, Notre Dame de Pierreville, P.Q. $6,150.

Defense Contracts

Here's a list of contracts for $10,000 or more awarded to Canadian firms by the Department of Defense Production and Defense Construction (1951) Ltd. for the first half of September. Total value of the contracts is $5,388,205.

The largest, valued at $770,840 was placed with **Excelsior Refineries Ltd.**, Edmonton, for the supply of diesel fuel oil. **International Business Machines** of Ottawa received a contract for the rental of office machinery amounting to $574,923. **Canadian Comstock Co.**, Ottawa, received a contract valued at $324,680 for alterations to heating systems at Petawawa, Ont., military installation.

Contracts awarded by the Department of Defense Production
Sept. 1 - 15, 1957

Contractor	Commodity	Value
Alpha Aracon Radio Co., Toronto, resistors		$ 13,884
B.C. Packers Ltd., Vancouver, canned fish		25,328
Beacon Uniform Co., Montreal, clothing		18,074
Beaconing Opt. and Precision Mat. Co., Montreal, Que., comm. equip. spares		10,785
Canada Coal Ltd., Toronto, coal		177,190
Canada Packers Ltd., Quebec, Que., dairy products		11,529
Canadian Fishing Co., Vancouver, canned fish		14,059
CGE Co. Ltd., Toronto, electronic tubes		14,210
C-I-L, Montreal, ammunition		35,012
Cdn. Technical Tape Ltd., Montreal, masking tape		11,498
Cdn. Westinghouse Co., Ottawa, aero engine modification kits		137,187
Cdn. Westinghouse Co., Ottawa, aircraft spares		10,364
Hugh Carson Co., Ottawa, luggage		18,298
Decca Radar (Canada) Ltd., Toronto, radar equipment		12,485
Dowty Equipment Ltd., Ajax, Ont., aircraft spares		439,376
B. Elliott Ltd., Port Hope, Ont., lathes and attachments		18,163
Excelsior Refin. Ltd., Edmonton, diesel fuel oil		770,840
Ford Motor Co., Toronto, station wagons		31,065
General Motors, Oshawa, trucks		35,283
Halifax Shipyards Ltd., Halifax, ship docking repairs		125,000
I.B.M., Ottawa, office machinery rental		574,923
John Leckie Ltd., Toronto, Ont., flags		10,868
Mechron Eng. Prod. Ltd., Ottawa, air instrument test equip.		31,938
Northern Elect. Co., Ottawa, teletype equipment spares		146,037
Peacock Bros. Ltd., Montreal, ships' machinery spares		13,290
Pembroke Shook Mills Ltd., Pembroke, Ont., packaging materials		11,631
Principal Cap & Sports, Montreal, clothing		16,339
R.C.A. Victor Co., Ottawa, electronic equip. maintenance		261,147
R.C.A. Victor Co., Ottawa, radar modification kit		22,336
Robinson Cotton Mills Ltd., Toronto, cloth		38,625
T. D. K. Rooney Const., Montreal, radio installation		73,124
Structo Co., Ottawa, warehousing equipment		57,801
Swift Cdn. Co., Toronto, meat		19,932
Toronto Carton Co., Leaside, Ont., packaging materials		12,706
J. J. Turner Co., Peterborough, Ont., flags		23,681
Victoria Mach. Depot Co., Victoria, ship docking repairs		35,000
Wheeler Airlines, St. Jovite, Que., charter of aircraft		11,620

Contracts awarded by Defense Construction (1951) Limited
Sept. 1 - 15, 1957

Contractor	Work description, location	Value
Ain & Zakuta Ltd., Montreal,	standard armament buildings with outside services — St. Hubert, Que.	$215,697
Burns & Dutton Concrete and Construction Co., Edmonton,	standard armament buildings with outside services — Cold Lake, Alta.	293,225
Burns & Dutton Concrete and Construction Co., Vancouver,	standard armament buildings with outside services — Comox, B. C.	207,011
Canadian Comstock Co., Ottawa,	alterations to heating systems—Petawawa, Ont.	324,680
Canadian Comstock Co., Winnipeg,	primary electrical services, supply and installation of pipe line—Churchill, Man.	258,258
Cardinal Painting & Decorating Co., London, Ont.,	exterior painting of permanent married quarters—Barriefield, Ont.	33,500
Cardinal Painting & Decorating Co., London, Ont.,	exterior waterproofing and painting of warehouses and central heating plant—Cobourg, Ont.	36,687
A. Janin & Co., Montreal,	standard armament buildings with outside services—Bagotville, Que.	236,809
E. J. Persons, Sweetsburg, Que.,	reconstruction of roads, walks, parking areas; drainage improvement and access road — St. Johns, Que.	239,255
J. A. Pollard Construction, Victoria,	storage wing addition to laboratory—Esquimalt, B.C.	16,880
Reid & Cambridge Ltd., Westmount, Que.,	replacement of heating system in armoury—Montreal, Que.	19,613
Semple-Gooder & Co., Rexdale, Ont.,	re-roofing and re-flashing of warehouse—Weston, Ont.	39,962
Standard Paving Maritime Ltd., Halifax, N.S.,	water supply system and appurtenances for ammunition depot — Bedford Basin, N.S.	145,750
Temiskaming Construction Ltd., Haileybury, Ont.,	re-roofing of armoury—Haileybury, Ont.	13,143
J. R. Theberge Limitee, Chicoutimi, Que.,	water supply main to alert hangar—Bagotville, Que.	17,107

Bank Staff Changes

Imperial:

L. F. BUTCHER, utility clerk, Eglinton & Oakwood Aves., Toronto.

T. R. CONNELL, utility clerk, Virginiatown, Ont.

G. D. FARRAR to be attached to the accountant's dept., Schefferville, Que.

G. M. GORDON, to be acting manager, Sherbrooke and Guy, Montreal.

J. R. GRENIER, utility clerk, North Bay, Ont.

J. D. GRIFFITHS, utility clerk, Sudbury.

B. D. KEOGH, utility clerk, Bloor St. and Lansdowne Ave., Toronto.

M. MICHELS, utility clerk King and York Sts., Toronto.

M. R. NEPHEW to be attached to the accountant's dept., Regina.

H. M. NEWTON, to be manager Dufferin St. and Ranee Ave., Toronto.

M. C. OWEN, to be acting manager, Somerled & Cumberland Ave., Montreal.

R. A. SCHOFIELD, utility clerk, Schefferville, Que.

* * *

Nova Scotia:

W. R. MONTEITH, manager, Fredericton, to be an assistant supervisor, Montreal, Que.

D. M. CAMPBELL, manager, Liverpool, to be manager, Newcastle, N.B.

C. V. HUTCHINSON, assistant supervisor, Vancouver, to be manager, Saint John, N.B.

P. J. T. LeGALLAIS, ast. mgr., Edmonton, to be manager, Dauphin, Man.

THE INVESTMENT FUNDS

Growth Mines Assets Down 8%

Growth Mines & Metals Investment Fund of Canada Ltd., Montreal, total assets fell 8.5% to $38,435 ($42,024 at June 30).

Net asset value per share fell 14.4% to $4.01 ($4.68) based on 9,582 shares (8,987 shares) outstanding.

Here are the portfolio changes for the quarter ended Sept. 30:

	Shares Held at Sept. 30/57	Change Since June 30/57
Common Stocks		
Falconbridge Nickel	100	+25
Hud. Bay M & S	20	+20
Campbell Chib.	300	+100
Gaspe Copper	60	+20
Lorado Uran.	100	+100
Quebec Lithium	100	+50
Stanleigh Uran. wts	100	+100
Bonds	$	$
Govt. of Canada 3/62	2,000	+2,000
Dom. St. & Coal 4/61 Cv.		—2,000

Growth Oil Assets Fall 18%

Growth Oil & Gas Investment Fund of Canada Ltd., Montreal, total assets fell 18% to $213,741 at Sept. 30 ($260,899 at June 30).

Net asset value per share fell 20% to $8.18 ($10.20).

Here are the portfolio changes:

	Shares Held at Sept. 30/57	Change Since June 30/57
Common Stocks		
Int. Utilities	700	+400
Inlaro. Pipe Line	200	+50
Dome Exp. (western)	1,400	+400
Gen. Petroleums	1,300	+300
Can. South Petrol	2,000	+200
Canso Nat. Gas	600	+600
Canso Oil Prod.	600	+600
Consol. West Petrol	500	+200
Mill City Petrol	10,000	+4,000
Security Fhld. Petrol	200	+200
Bonds	$	$
Govt. of Canada	11,000	—3,000
Can. Southern Oil		—6,000
C.P.R. 4/69	6,000	+2,000
Westcoast Trans. 5½/88	8,000	+2,000

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FP-17

HERE'S HOW...

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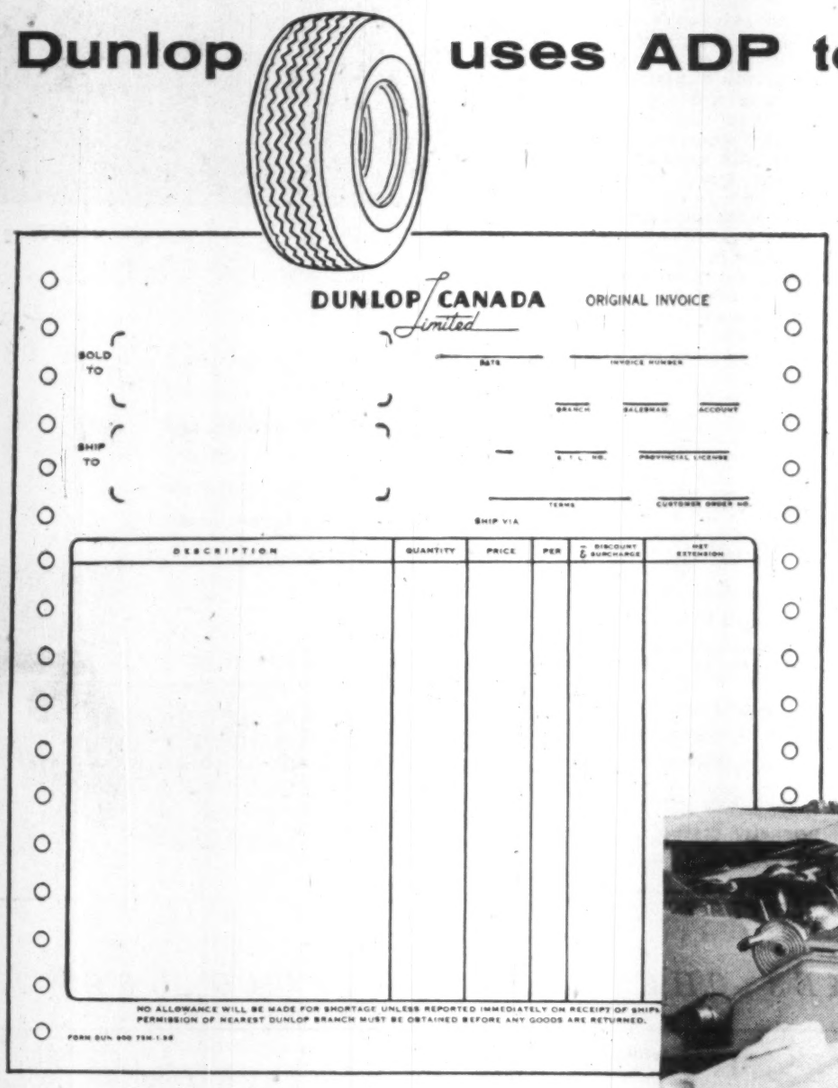

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The Actuary:

Life, death, computers and statistics all come under study when the actuaries gather...

By ARTHUR PEDOE

It is over 50 years since the International Congress of Actuaries last met in New York and came on to Canada.

It was then almost a different world.

The members in 1903 were taken for a ride on the New York elevated railroads, a special treat then, but now a thing of the past.

Arthur Pedoe, elected this week vice-president of the Society of Actuaries, is life manager and actuary of Prudential of England, Montreal. He is well qualified to comment on actuaries and their history. This is his second article for FP.

The development of life insurance in the interval has been phenomenal.

In Canada the life insurance in force in 1956 was over 50 times what it was in 1903 and in the U. S. the increase has been almost as great — 40 times.

The "in force" in Canada is now $30 billion; the premium payments and savings for life insurance and annuities paid to the life insurance companies in Canada now exceeds $600 million a year and has doubled over the last 10 years.

Over 1,200 actuaries attended the 15th International Congress in New York on Oct. 14. They come to Toronto for the two days, Oct. 22 and 23.

More than half are from the U. S. and Canada but about 600 from 30 other countries including places as far apart as Finland and Australia, Holland and Japan, with nearly 100 from the U. K.

In former congresses the discussions ranged over the whole field of actuarial work but for this, the 15th Congress, concentrated on three major subjects — (1) electronic data processing equipment, (2) group coverage for life insurance and pensions, (3) classification of risks for individual life insurance.

In all these three subjects there have been major developments in the U. S. and Canada over the past few years.

There were 91 papers written for the Congress by prominent actuaries from 18 different countries, four of which are by Canadian actuaries: John W. Ritchie of the **Sun Life** on Electronic Equipment; Geo. N. Watson of the **Crown Life** on Group Life Insurance; J. R. Gray of the **Canada Life** on Substandard Risks and H. H. Wolfenden, a consultant, on Standardized Death Rates.

Magnetic tape electronic computers are one of the wonders of the age but the steps from a laboratory invention to a system for daily office routine requires large expenditures of time, money and opportunity for experience.

The first installation was in the actuarial division of the **Metropolitan Life** of New York where they had an assembly of over 100 separate punch card machines with a yearly rental of almost $250,000.

With auxiliary equipment these magnetic tape electronic computer systems cost about $2 million apiece and it can be visualized that without the co-operation of the largest companies the invention would have taken many years to develop to the practical machine it has now become.

Metropolitan has three of these machines.

In Canada the first magnetic tape electronic computer is being installed by Sun Life in Montreal.

London Life and **Confederation Life** are being organized for the use of such a machine in the near future.

It is estimated that in five years the life insurance company which is able to use such a machine can repay the initial outlay but the initial planning, taking a minimum period of two years, can be described as just "terrific."

These computers can handle over two million groups of electrical impulses per second each of which can represent an action.

The practical use of this potential is almost unlimited but years of hard work lie ahead before the machine can be adopted by any but the largest companies.

The simplification introduced by these machines into life office routines to justify this enormous expenditure is due to combined operations.

In one life insurance company there are over 10 different sets of records kept each involving hundreds of thousands of cards and overlapping to a large extent.

The saving of labor by the centralization of these into one combined operation handled by one of these machines is the justification for the use of these expensive computers.

Group life insurance is a contract entered into by an employer which in one policy covers his employees on a year-to-year basis.

Where the employees contribute to the cost it is generally based on the amount of insurance which is determined by salary, grade and years of service.

Group life insurance was a U. S. idea although Canadian companies followed hard on the heels of the pioneers.

The development on this continent has been phenomenal. In 1956 one quarter of the total life insurance written in Canada was group and the amount was over 10 times what it was 10 years earlier.

Group insurance is an alternative to government sponsored plans of social insurance yet it is interesting to note that in several countries in which government schemes are in operation this U. S. idea has taken hold in recent years as a supplement to social security plans.

In Sweden, for example, group insurance now represents 17% of the total life insurance in force (in Canada it is 25%).

In France group now represents half the life insurance in force but owing to the repeated devaluation of the franc a year-to-year contract can be readily adjusted to new values of money.

The popularity of group is its relative cheapness. It covers only the active workers. It is "pay as you go" in every sense of the word and is no substitute for modern individual life insurance with its "built in" savings features.

Group Pensions. It may surprise the public to know that it was only in 1921 that life insurance companies entered the pension field whereby pensions for whole groups of employees could be provided by their employers.

The private pension fund on a paternalistic basis with no contractual rights was the first form of pension developed.

Pensions as a claim on industry by industrial workers is a 20th century development.

For the first time in over 50 years, the International Congress of Actuaries is meeting in North America.

Attending the 15th Congress — with sessions during October in both New York and Toronto— will be some 600 actuaries from about 30 countries aside from Canada and the U. S.

Previous congress was held in Madrid in 1954. Last meetings in North America were held in New York and Toronto in 1903.

Trade unions have concentrated on improved welfare plans when labor contracts are being revised and when they feel that claims for substantial wage increases would not receive public support.

In one paper by a U. S. actuary it is stated that in that country there are 30,000 pension plans in force (outside of government plans) covering some 13 million workers with funds exceeding $24 billion, the funds having tripled since 1947.

Same Scale

In Canada the development is on the same scale and probably $250 million a year is currently being paid into these funds.

In both Canada and the U. S. there is little or no supervision of these pension funds unless taken out with a life insurance company and here lies a source of serious trouble in the future.

It is curious to compare the supervision of Canadian life insurance companies — among the strictest in the world — with the indifference to the huge funds accumulating under private pension plans.

Pensions and Inflation. It would be expected that in discussions of pensions by actuaries the depreciation of the purchasing power of the pension would arise.

European actuaries, especially French, have spoken of the problem of upgrading pensions for the victims of devaluation. The repeated devaluation of the French franc has posed special problems.

First of all the social security reserves were used up to pay current revalued pensions and that scheme went on a "pay as you go," basis.

Other private plans were gradually forced to give up building the reserves which control the future costs of pensions.

The pension scheme for senior workers in industry which is supplementary to the government social security scheme was put on a basis where pensions are revalued as depreciation occurs, the increasing burden having to be borne by industry.

Public Wary

One French actuary writes: "As long as there remains a doubt as to the stability of the franc, the public will refuse to become interested in retirement plans which are not revalorized.

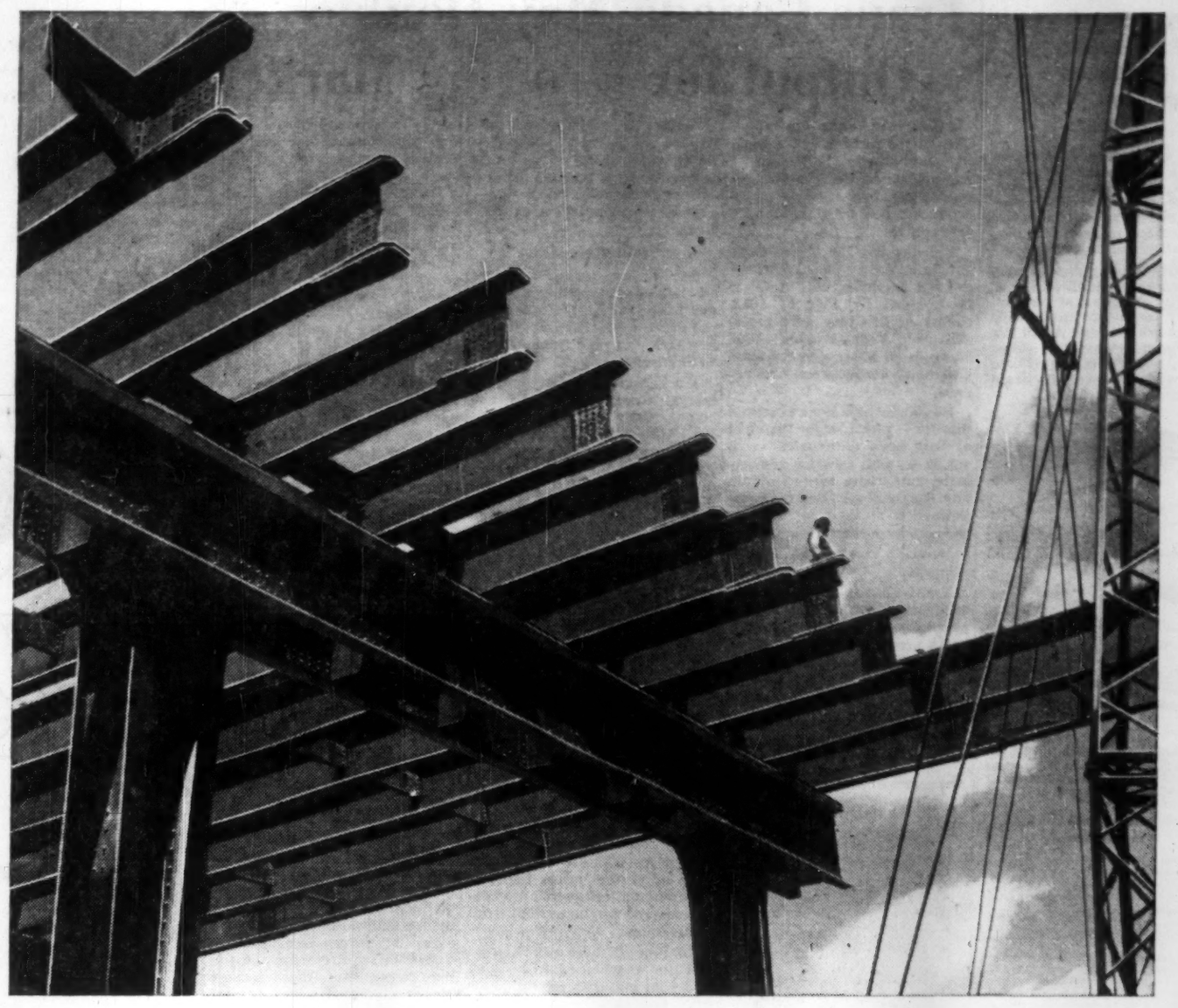
"The same feeling of distrust prevails with regard to life insurance and this explains its relative slow development in France."

By "revalorized" is meant readjusting pensions to purchasing value.

In 1952 the French government issued a loan with the principal tied to the price of gold in the free market which in practice means tied to the U. S. dollar.

In view of the latest devalu-

(Continued on page 34)



Steel breaks a bottleneck

New Burlington Bridge will speed traffic flow to Niagara Peninsula

The problem—a Bottleneck, caused by a three mile stretch of two-lane highway near Burlington, interrupted by a lift bridge over the channel to Hamilton Bay.

The solution—To build a highway and bridge wide enough for four lanes of fast moving traffic, high enough to overpass the ship canal.

When the fabulous, steel-constructed Burlington Skyway Bridge is completed, highway and water traffic will be able to move easily—unhindered. Steel from Bridge & Tank's Hamilton Division has played an important part in this record-breaking project.

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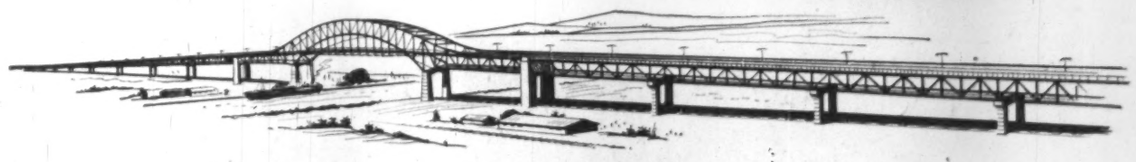

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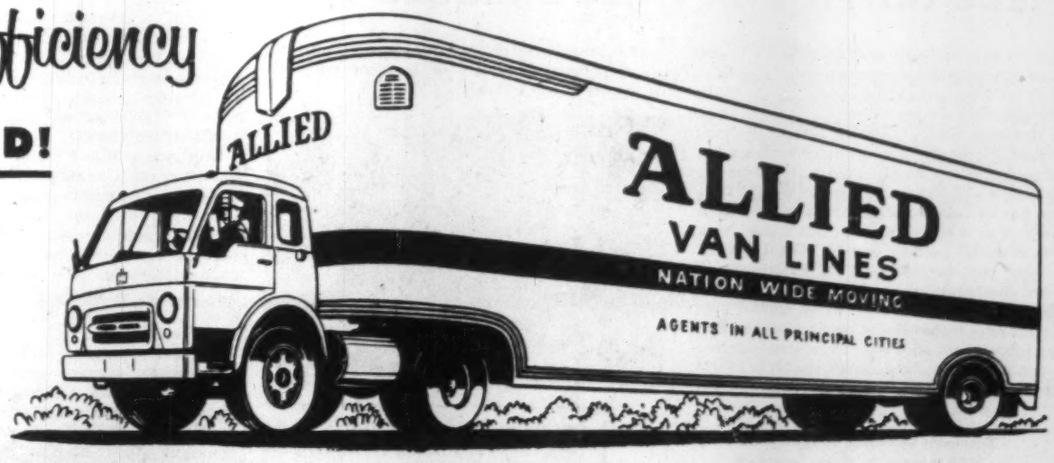

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AGENCY'S NEW OFFICE

James Lovick & Co., advertising agency has changed its Calgary office to 629-7th Ave., SW.

Trans Canada May Double Output for Growing Market

A full year before the Trans-Canada gas pipeline is completed to Ontario and Quebec markets for every foot of gas contracted for from western producers has been sold under firm contract.

It looks now as if the company's presently planned transmission facilities will have to be doubled by 1961 or 1962, claims A. P. Craig, vice-president of **Trans-Canada Pipe Lines** in an address to the 32nd Canadian Purchasing Conference.

In view of this huge potential market — much larger than had at first been anticipated — it would be well now for government authorities to go slow on any further gas export commitments; at least for another three to four years.

Here is a digest of Mr. Craig's remarks:

Trans-Canada has already sold under firm contract all the gas now purchased from Alberta producers and covered by our present permit from the Alberta government.

It's no secret among the gas producers that we are in the market for more gas.

Neither is it any secret that we are not going to pay prices for this additional gas that may jeopardize the position of the eastern distributor with reference to the price of competitive fuels.

Full Capacity

Our already firmly contracted delivery commitments for our fifth year of operation will require the full capacity of our first string of pipe from Alberta to Montreal.

It's just at this point that the market development story becomes really interesting — as we try to estimate the requirements of the heating season beginning with the fall of 1963 — five years after Western Canadian gas reaches the eastern market.

There are strong indications from distributors and from special process users of natural gas that the market will require at least twice as much gas as is now provided by our present Alberta permit and by full capacity operation of our pipeline as now planned and financed.

Several of the largest distributors have indicated that within a year they will be in the market for 1963 contract volume increases ranging from 40% in one case to 100% in another.

These distributor estimates are of course based on natural gas prices that are competitive with other fuel prices for residential and commercial applications and for many industrial applications.

On top of these normal distributor markets are the fuel and raw material requirements of a few very large industrial applications where it is indicated that natural gas is very much preferred and is economic at prices near the present levels.

These applications are both petro-chemical and metallurgical and are for use in projects already in production and using other fuels, or definitely planned and financed, or in one very interesting case in the pilot plant development stage with extremely interesting possibilities for making a really large and important contribution to the Canadian economy.

An certainly, unless Canadians suddenly lose their progressive ways — many more — as yet unplanned—large Canadian applications for natural gas will develop in the next five years.

There are very strong indications that the market will grow much faster than has been thus far generally recognized—a growth that would require the doubling of Trans-Canada's presently planned facilities by 1961 or 1962.

All of this suggests that the natural gas industry — and those charged with the administration of its development — must face up to the problem which confronted the developers of hydro-electric energy half a century ago and which is still posing problems for those charged with the conservation of our natural resources — such as the controversial Columbia River water rights.

Many years ago, far-sighted Canadians decided to restrict closely the export of hydro-electric power from our country.

Unlike water-power — natural gas is not a recoverable resources and we believe we are reflecting the view of most Canadians when we say that utilization of the basic ingredient of this promising new industry — now only in its early development stage — must continue to be considered on a "Canada first" basis.

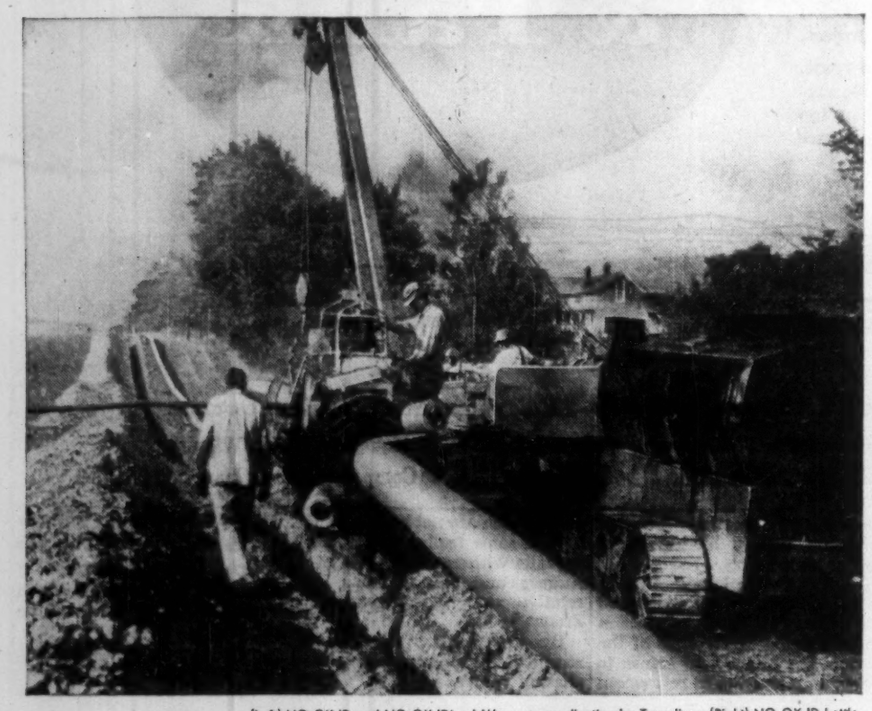
It is suggested that it would be very much in the Canadian national interest to obtain at least another three or four years of Canadian market experience before determining what is the excess of proven reserves over Canadian requirements and the requirements of those export plans to which the federal government has already given or promised its approval.

ANNOUNCEMENT

PHILIPS INDUSTRIES LTD.

D. H. PRENTICE

O. W. Rodomar, president and general manager of Philips Industries Limited, Toronto, has announced the appointment of D. H. Prentice as General Sales Manager. With the Company since its inception in Canada, Mr. Prentice has been associated very closely with the many phases of its growth.



(Left) NO-OX-ID and NO-OX-IDized Wrapper application by Traveliner. (Right) NO-OX-ID kettle.

3-PIECE OUTFIT FOR WELL-DRESSED PIPE

This carrier pipe is being well dressed for years of uninterrupted service undergound. A 3-piece outfit—cleaning machine, dope kettle and Traveliner—does the job.

The dressing? NO-OX-ID Coating and NO-OX-IDized Wrapper—a combination that provides chemical-mechanical protection against corrosion and destructive soil action. NO-OX-ID is applied hot or cold by hand or machine...over the ditch or at the mill. No noxious fumes. You save on material because less NO-OX-ID coats more pipe per day. NO-OX-ID Coating and Wrapper combinations shield against corrosion attack.

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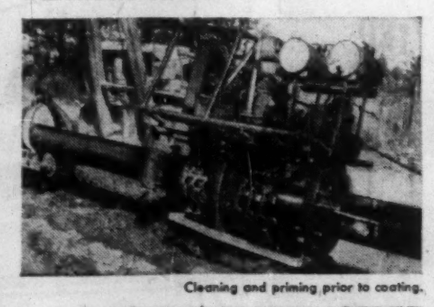

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The Actuary

(CONTINUED FROM P. 33)

ation of the franc these bondholders are secure as regards their principal provided subsequent governments honor the deal.

There is a warning here to Canadian life insurance companies. We have been too complacent with the creeping inflation which has afflicted us these past few year.

What have the actuaries of the U. S. and Canada got to say on this question?

The extent of inflation has been far less over here than in other countries and so it does not get the attention it merits.

U. S. Plan

However, U. S. actuary, W. E. Jenkins, has outlined the Variable Annuities plan — a scheme which is currently confined largely to teachers and staffs of U. S. university colleges.

The variable annuities are tied to equity-type investments and fluctuate with the current earnings and market value gains and losses produced by the underlying investments.

Not more than half, usually, of an individual's premium payments may be allocated to the variable annuity, the balance being applied to a regular fixed dollar annuity.

There are schools of thought strongly opposed to the extension of the sale of variable annuities to the general public.

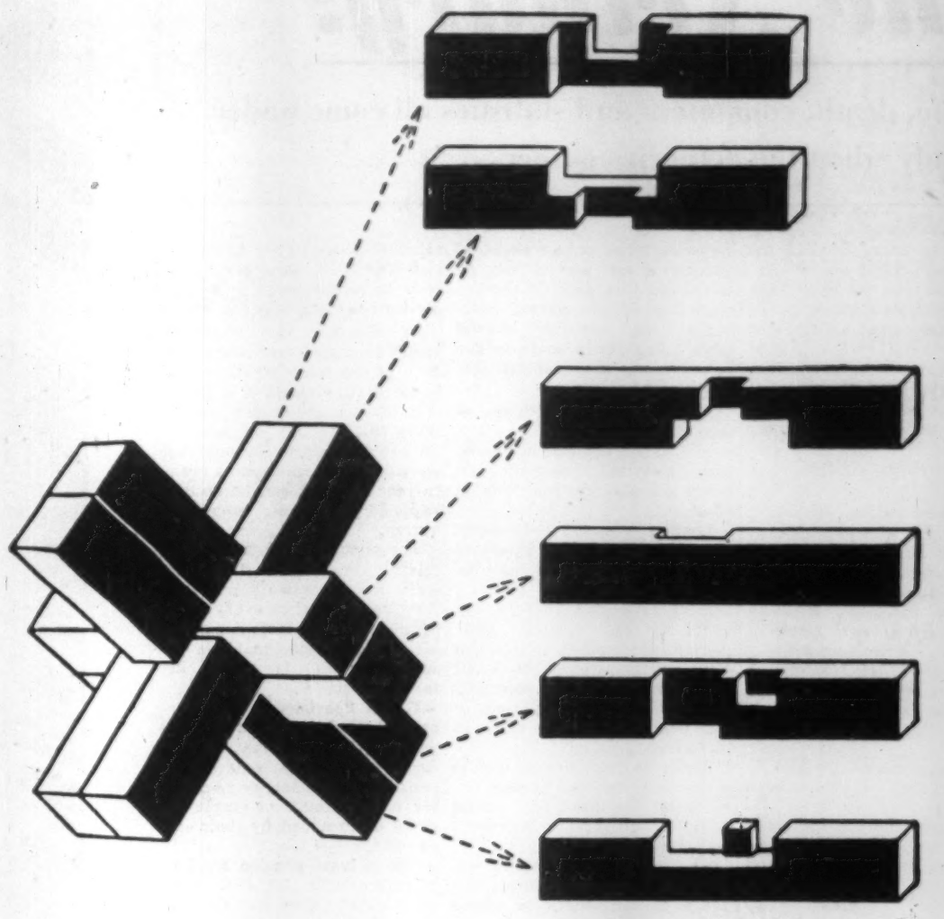
A thought worth considering is whether these schemes are not the obvious reaction to the rigid and restrictive investment laws which apply to U. S. life insurance companies.

In Canada we have a peculiar situation. Although Canadian life insurance companies are allowed to invest up to 15% of their assets in common stocks, they have only 3.6% so invested, with over one quarter invested, in Canadian stocks.

Mortgages have been the mainstay of Canadian life insurance investments over recent years and they do reduce the special problems which life insurance companies have as regards inserting their assets at market values in their balance sheets, as required by government regulations.

A point of interest is made by a Swedish actuary regarding the problem of investing in equities by Swedish life insurance companies is that the common stock market in his country is too small to meet the investment needs of the companies.

The contributions by the European actuaries on this matter are extensive but inflation is destructive of much that is worthwhile and no quibbling or juggling of formulas will make it otherwise.



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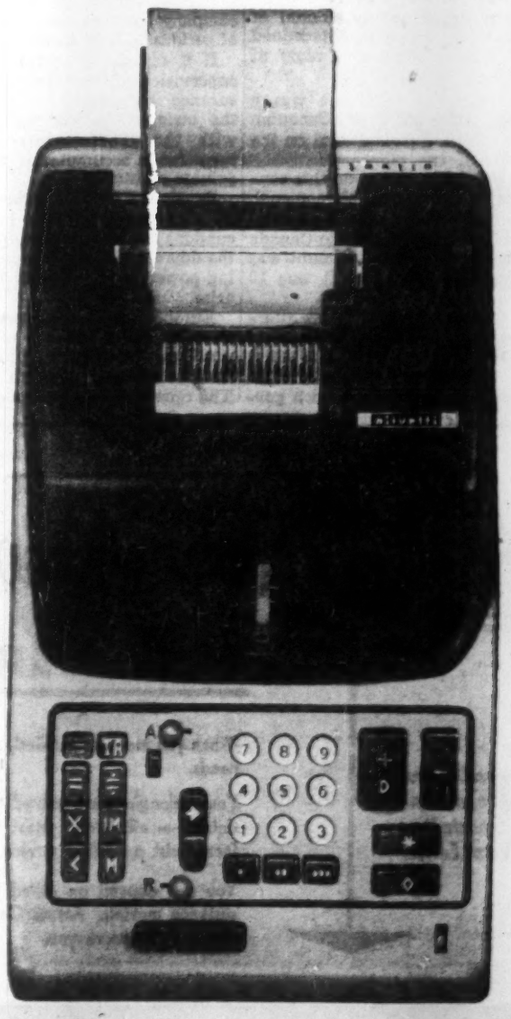

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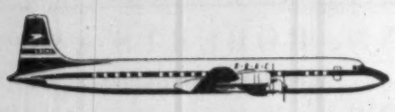

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Growth

Manufacturing plants new to Canada, expansions of existing industry across the nation

Areas, industries are invited to report their progress in this column

N. B. Gets Wire Plant

Western Wire & Cable Co. which started operations in Vancouver nine years ago, and now has plants in B. C., Alberta and Saskatchewan, has moved into New Brunswick.

The company has completed plans for a new wire making plant in Lancaster and tenders will shortly be called for the building.

J. A. Kippan, general manager of Western Wire and Cable, stated that production should start about March of next year.

The new plant will draw wire from metal rod of copper and aluminum, using equipment brought from England, Switzerland and the United States, as well as some of Canadian manufacture.

The initial phase of the operation will employ up to 35 persons, most of whom will be local and trained for the work. As production is diversified, it is anticipated that additional workers will be required.

It is planned that eventually the company will manufacture a complete line of electric wire and cable for sale in Canada and abroad.

* * *

Seeks Industry In U. K.

Off to the U. K. next spring in search of new industry will be Neville Keefe, hustling general manager of Georgian Bay Development Association in Ontario.

It will be his first trip over-

W. NEVILLE KEEFE

seas on the quest but a logical extension of work he has been doing for more than two years past. In that time, more than 500 industrial firms have been interviewed as to possible location in the Georgian Bay area. And this is the score that has been chalked up:

—A total of 28 firms have moved into the area.

—Another 24 are currently investigating possibilities.

—A further 85 are interested in the long-term prospects.

Mr. Keefe's trip has been sponsored by the four member zones, comprising 60 member municipalities, of the association. He will spend five weeks in Britain but before leaving, he will be seeking leads from companies in the region that have associations with British and other European concerns.

To aid existing tourist agencies in this holiday area, the association, in co-operation with provincial government organizations, is engaged in a detailed survey of cruise routes from Detroit through Georgian Bay and the Severn and Trent waterway systems. Kenneth Wells, who is doing the survey prior to publication of a marine guide to the region, has completed work along the eastern and northern shores.

* * *

New Work — New Name

Corresponding with a similar move by affiliates in the U. S., **Machine & Tool Designing Co. of Canada** has changed its name to **The M & T Co. of Canada** because the pattern of its activities has altered substantially over the years.

The company which now has offices in Montreal, Toronto, and Winnipeg, has expanded rapidly and is currently contributing to the aircraft and guided missiles programs and to the uranium and mineral processing fields. It is also active in automation and in the provision of architectural-engineering services.

Only a small percentage of its volume in the past year was in machine and tool design.

* * *

Sask. Looks North

Final arrangements are now being made for the two-day Northern Saskatchewan Development Conference to be held in Saskatoon next month.

Representatives from between 20 and 30 boards of trade and chambers of commerce in the province are expected to attend. The conference will include six panel discussions, each dealing with a different subject, and chairmen of these business sessions will be:

Forest resources, Ian McDonald; mineral resources, Ernie Goos; agricultural resources Wes Aitkenhead; transportation, Martin Semchuk; industrial development, Gerry Willows; tourist attractions, Rod Thomson. The first three topics will be discussed on Nov. 20 and others on Nov. 21.

Chairman of the conference is Cliff Dunfield of Meadow Lake. A registration fee sufficient to take care of conference expenses will be charged. The Saskatoon Board has been asked to schedule a general membership dinner meeting for the evening of Nov. 20 with Hon. Alvin Hamilton, newly appointed Minister of Northern Affairs, as guest speaker.

* * *

For Artist, Engineer

Major expansion by **The Hughes-Owens Co.**, major supplier of artists' supplies, cameras, and optical, engineering and other equipment includes a new showroom and reproduction centre in Toronto and a new branch office in North York in Metro Toronto.

The downtown premises at 470 Yonge St. incorporates 4,000 sq. ft. of showroom space and another department of similar size with facilities for Ozalid direct line reproduction. The North York location on Bermondsey Road takes in branch office, warehouse and retail showroom space as well as a conversion department for sensitized Ozalid reproduction materials. It has 12,000 sq. ft. of floor space with ample provision for future expansion.

A highlight of the official opening of the two properties was a contest for artists and photographers.

* * *

50 Years in Drugs

Official opening is scheduled for next week of a new Toronto branch at Dufflaw Road of the **National Drug & Chemical Co. of Canada** which has been operating here for more than 50 years.

The original company was formed by the amalgamation of nearly a score of wholesale houses across Canada. Now it has 15 wholesale drug warehouses in main centres and the latest Toronto development is one of a number of properties recently constructed for the company.

* * *

Office Equipment

Roneo Co. of Canada reports that increasing sales have necessitated an expansion of facilities in widely separated areas in Canada.

Establishment of one new sales branch and the securing of much larger accommodation for two others is announced by George Fells, managing director.

The newest unit of the Roneo organization is located at 1974 Wyandotte St. East, Windsor, Ont. New address for the Montreal branch is 1439 McGill College Ave. and that of the one in Calgary is 307A 6th Ave., West.

* * *

Sudbury Office

Construction of an office building to accommodate all its Sudbury offices in Sudbury, has been started by **Canadian Industries Ltd.**

The building, to be located on Copper Cliff Road about two miles from the heart of Sudbury, will house the district sales offices of CIL's explosives, chemicals and paints divisions which are now at different locations in the city.

The building will be of modern brick construction and will have total office space of approximately 2,000 sq. ft. with additional space for service facilities. Construction is expected to be completed in five or six months.

General contractors are **Carrington Construction Co.**, Sudbury and architects are **Fabro and Townend**, Sudbury.

Vancouver's Unique Tunnel Will Cost $16.6 Million

British Columbia's busy Toll Authority is aiming for spring 1959 completion for the unique Deas Island tunnel beneath the Fraser River.

The four-lane, 2,100-ft. tunnel just south of Vancouver was begun last September, will cost $16.6 million.

It's the first time the trench method of construction has been used for a four-lane tunnel says the government. Concrete sections are built in drydock, floated into position, sunk in a prepared trench, then connected.

Other Toll Authority projects:

—The $9 million Oak Street Bridge in Vancouver opened last June. It's more than a mile long, has four lanes.

—The Agassiz - Rosedale Bridge over the Fraser 60 miles east of Vancouver, opened in late 1956, is 6,127 ft. long.

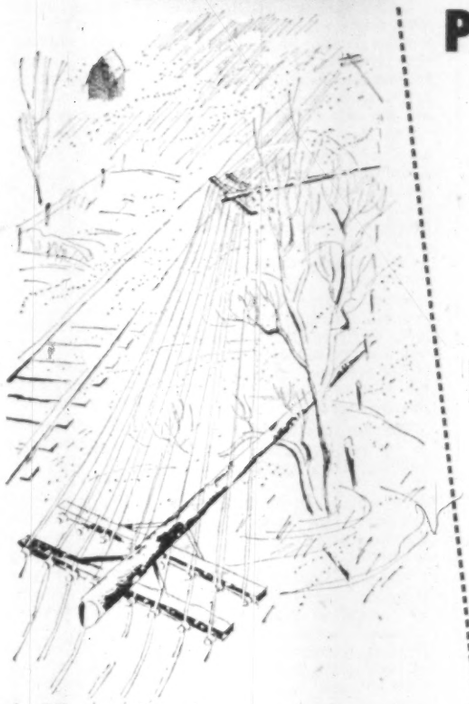
—The $19 million, 4,240-ft., six-lane Second Narrows Bridge across Burrard Inlet is slated for traffic late next year or early in 1959.

—The $8 million Kelowna Bridge across Okanagan Lake is expected to be complete in October, 1958.

—The 2,062-ft. cantilever bridge across Kootenay Lake near Nelson was to be opened this month.

W·W

Compare the Cost of Aluminum Conductors Pound for Pound



Aluminum conductor will carry *twice* the amount of power the same distance as an equal weight of copper.

Even at today's low copper prices this provides a 50% saving in base metal costs for aluminum conductor cables.

Also, because aluminum cable is only half the weight for any given job, there are extra savings in installation costs as well.

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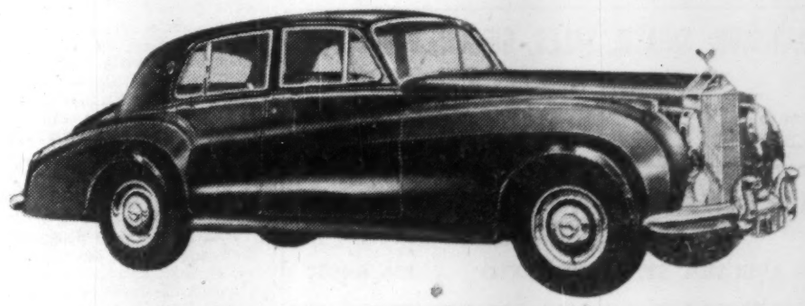

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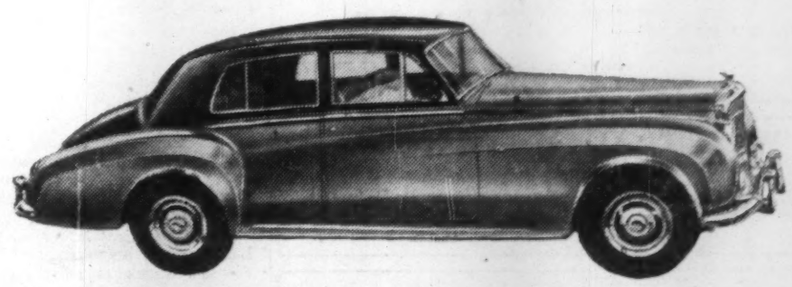

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Integrated Data Processing

This Tool Can Spell Profit

By KENNETH M. PLACE

One of the first uses of the phrase "integrated data processing" (IDP) was at an American Management Association Conference in New York in February, 1954.

In the past two years, however, many volumes have been written on the subject and this new term has been seized upon by business machine manufacturers as a means of promoting the sale of their products.

The use of the phrase on such a widespread basis has undoubtedly created a considerable amount of misunderstanding and confusion in people's minds, particularly those not directly concerned with the processing of business data.

Much of this confusion and misunderstanding would not have occurred if the emphasis had been placed upon the principles involved instead of on the machines required to implement them.

Webster defines "integrate" as "to combine (parts) into a whole." Thus when a typewriter produces a punched card which can be used in a tabulating machine, the two machines may be said to be integrated.

Integrated data processing is therefore really nothing new but rather a co-ordination of various systems for the handling of paper work by means of mechanical methods.

In the process of co-ordination and integration the drudgery of routine clerical operations is put on machines and the major clerical functions consist of programming and analyzing rather than transcribing and recording.

There can be no doubt that management in the past has placed far more importance upon the installation of automatic machines to improve production efficiency than it has upon the application of mechanization to improve office efficiency.

It is now evident, however, that equal importance must be given to increasing efficiency in the processing of business data in order to realize the full benefits of the automation of production equipment.

Reducing Repetition

Before duplicating and mechanical methods were available, data were recorded and transcribed as many times as required in order to complete the business cycle.

One of the earliest attempts to reduce the repetitive writing of data was through the use of carbon paper making it possible to create several exact copies of the original document and thereby eliminating copying and errors in transcribing.

More recent developments include:

- One-write systems such as might be used in a payroll operation whereby the writing of a payroll cheque would cause the proper information to be recorded on an employee earning statement, payroll register, etc.
- Bookkeeping machines.
- Punched card tabulating machines, etc.

And so we have progressed from one stage of development to another and have finally reached the concept of "Integrated Data Processing."

What, then, have been the factors contributing to the tremendous amount of interest in the subject during the past few years?

In order of importance, they are the following:

1. Management needs far more timely information concerning sales, production and financial results.

Since the end of World War II we have gone from a seller's to a buyer's market and into a period of intensive competition.

Customer service and prices are therefore of paramount importance and every opportunity to improve service and reduce costs must be developed to the full.

While historical information has a value, management today has to make decisions faster and sound decisions can be made only if the information which is available to management is current.

2. Increased paper work.

The amount of paper work has increased at a substantially faster rate than the general level of business.

While management requires more information than heretofore, there has been a tremendous increase in the amount of paper work due to the demand of all levels of government for special reports and statistics of all kinds.

3. Increased clerical costs.

In the past the conventional approach to the paper work problem has been to add more clerks.

However, the point has been reached where the mere addition of clerks is not the solution to the problem and clerical costs have increased out of all proportion to direct costs.

After having tried all the previously developed means of reducing clerical costs while at the same time handling a larger volume of data more rapidly and having met with only limited success, businessmen generally have realized that some new technique must be developed.

Hence came the "integrated data processing" approach as it is known today.

Three Conditions

"Integrated Data Processing" is based on the following three conditions:

1. Original data are recorded at their point of origin in a manner capable of mechanical processing.

2. Once in this form, these data are processed exclusively in a mechanical manner.

3. All processing data are integrated so that original data in mechanical form serve all subsequent applications.

In order to obtain the maximum benefits from integration, it is first of all necessary to study the implications of the system from an over-all company viewpoint rather than from a divisional or departmental level; to expand and co-ordinate the piece-meal office mechanization which has developed over the years.

One of the basic reasons for the tremendous increase in paper work and consequent increase in clerical costs has been the failure to attack the problem from an over-all viewpoint.

Instead most attempts directed toward works simplification and the use of mechanical applications have been made on a limited basis; for example, individual systems were established for the sales office, the manufacturing unit, the accounting department, ets.

Individually, each unit could conceivably possess a fairly efficent operation, but collectively the system was not capable of producing quickly all of the information management required for efficient administration.

It has also been found that information prepared by one segment of an organization might not necessarily satisfy entirely the requirements of another so that it is inevitable that there will be a considerable amount of duplication in both the type of records being maintained and in the information being reported throughout the system.

Common Language

When an integrated data processing system is used the unreliable human element of transcribing from one medium to another can be completely eliminated at all key operating points.

In order to integrate or combine several unrelated machines into an efficient errorless data processing system it is necessary to have a common language to replace the various languages used by different machines.

The medium by which one machine directs another has come to be known as "common language."

Initially five channel punched paper tape was selected as the "common language" because this medium was common to more different types of machines than any other and had performed reliably for many years in teletype systems.

Perhaps it is most widely used because of the communication problem created by the decentralization of business.

There was a time when the usual corporate organization was a closely knit affair with head office, sales office and production facilities at one location.

The trend during the past few years has been in reverse so that a good communication system is essential if information is to be transmitted throughout the organization promptly.

Punched paper tape can be used for transmitting data by teletype and can be used by a number of types of equipment.

Through the medium of a tape-to-card converter, the data contained in a tape can be converted into punched card data. In any event the significant characteristic of integrated data processing is not the use of any specific common language but rather the automatic perpetuation of repetitive data.

Steps in a Typical Problem

A typical example of an integrated data processing system in operation will serve to demonstrate the scope and possibilities.

For purposes of illustration let us assume that the sales office, manufacturing unit and head office are at different locations and that all are connected by a teletype system.

Generally the first approach to integrated data processing is made in the handling of sales orders. The information on the order is probably the most widely used information in the business process.

A logical approach to the problem would be as follows:

- **Upon receipt of a customer's** order in the sales office, it is sent to a teletype machine equipped with tape reading and punching mechanisms.

An order acknowledgment set is prepared on the sales office teletypewriter machine which simultaneously prepares a copy of the order including a bill-of-lading set on a teletype received located in the manufacturing unit.

A prepunched master tape for each customer containing all the repetitive information can be used in the tape reading mechanism to automatically type the repetitive information.

A tape punching attachment can also duplicate all of the information contained in the order acknowledgment for later use in the invoicing operation.

- **After the shipment** has been made the order can be completed as to quantity shipped and value.
- **The master tape mentioned** can now be used for completion of the sales invoice, the only additional information required being the quantity and value.
- Through the medium of a tape-to-card converting machine punched cards can be produced for use in the tabulating of accounts receivable and sales statistical information.

The above illustration refers basically to data processing as it affects the income phases of the business. Another practical application is the purchasing, payment, cast distribution function.

In either case, the data introduced into the system at the commencement of a transaction is automatically perpetuated throughout the business cycle. This is integrated data processing.

This brief description of the mechanical aspects of an integrated data processing system, however, merely scratches the surface of its implications to modern industry.

It has been said that "automation" is ushering in the second industrial revolution, but automation in the factory cannot go forward without automation in the office and it is this function that a modern integrated data processing system must perform.

Integration Not New

In order to develop this theme further we should probably now discard the term integrated data processing in favor of electronic data processing, for this is a logical extension of the common language system.

This is not intended to minimize the value or importance of an IDP system, however.

Integration, *per se*, is by no means new as far as data processing is concerned. A little sober reflection will reveal that even the simplest accounting system has elements of integration in it that makes it partial "integrated data processing."

What is currently called IDP then is merely a further extension of an existing trend accelerated by the use of mechanical equipment.

What we have done so far is to show how all, or substantially all, subsidiary documents directly in the line of progression of the particular field concerned can be generated from a single typing of an original document.

An IDP system properly applied to sales can from one writing produce most, if not all, documents required for sales control.

It cannot, however, without additional equipment perform any analysis.

Further, it must be recognized that in any mechanical system accuracy of an original document is essential to the accuracy of the system.

An error level which is tolerable in a manual system (because it is audited, processed and reviewed by many different people who usually catch most of the errors) will be fatal in an IDP system.

Audit controls and routine internal controls must be established right at the point of data origination. From then on rather simple controls such as cross-foot totals, over-all control balancing totals, etc. can serve to detect errors in the system.

As already mentioned, IDP aims at integration in a specific area, i.e., sales, disbursements, accounts receivable or some such field.

This is a real step forward, but how much better it would be if the whole system could be integrated.

It can—by the use of an electronic computer, and with this tool in the system it is called "electronic data processing"—EDP.

It should be pointed out at the outset that IDP and EDP go hand in hand.

A computer is a tremendously flexible tool which will perform a fantastic amount of work in a very short time.

If its potentialities are to be realized, however, it must be provided with input data in an efficient manner.

This requires some sort of IDP system in processing input data. Fortunately the computer itself can do most of this processing and it is therefore not essential to install IDP systems before proceeding to the use of a computer.

In cases where the computer is being heavily loaded, or where the volume of data is large, separate IDP systems to sort, process, and handle input data are probably desirable and usually more economical.

It is not, however, essential that you mechanize your operation before installing a computer.

If you are not now mechanized, you can proceed directly to a computer providing that you are prepared to do a really down-to-earth, thorough-going methods job.

This is no hardship, for if you install a computer you will have to do this basic study in any event.

Why is this so?

An electronic computer is a management tool of infinite potential. It differs from an IDP system in that in addition to processing data it will also:

Add.
Subtract.
Multiply.
Divide.
Compare.
Make logical decisions.

But you must tell it—in detail—what to do—this is called "programming."

In order to do this you must **know every detail of your operation** and, most important, you must clearly **define your problem.**

For this reason a methods job is necessary. Happily once the methods study is completed the coding of the operation is not too difficult a step.

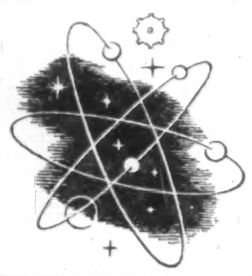
Even more happily this type of methods study has proven, in every documented case so far, to be of great value in increased efficiency.

Scientific Management

In considering the adoption of IDP or EDP techniques in a business operation many executives look first for a dollar saving.

This is the major criterion used to determine whether or not they should enter the field, and there is no doubt that many people base their decision on this one factor.

(Continued on page 38)



This article is the introductory chapter of a new booklet on electronic data processing just published by the Canadian Institute of Chartered Accountants, Toronto (price $1.75 per copy).

Mr. Place is first assistant treasurer of the Du Pont Co. of Canada, Montreal.

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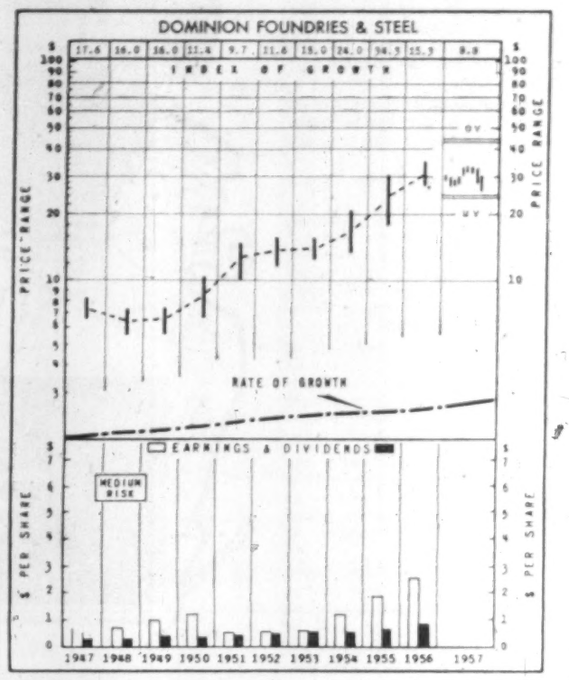
Selected Growth Stocks

— Quarterly Review —

By NESTOR

This exclusive FP series of Selected Growth Stocks was chosen by one of the continent's most prominent and successful investment advisers. The reasons for choice shown below the accompanying charts were those given when stocks were chosen in January, 1953. Each will be reviewed quarterly. This series in FP does not constitute a recommendation to buy these stocks.



Dominion Foundries & Steel

Dominion Foundries & Steel Ltd., at recent market price of $26 is 11% above UV level ($24), has room to rise 65% before reaching OV level ($43). Price is 10 times 1956 earnings of $2.60 per share. Yield, at indicated annual dividend rate of $1 per share, is 3.85%. Price in 1957 has ranged between high of $33½ and low of $25¼.

Orders for the fourth quarter are understood to be following the usual seasonal decline as business activity diminishes with the coming of winter. Orders for hot rolled products are on hand in satisfactory volume, but there has been some slackening in the demand for foundry products because of a drop in the manufacture of railway rolling stock.

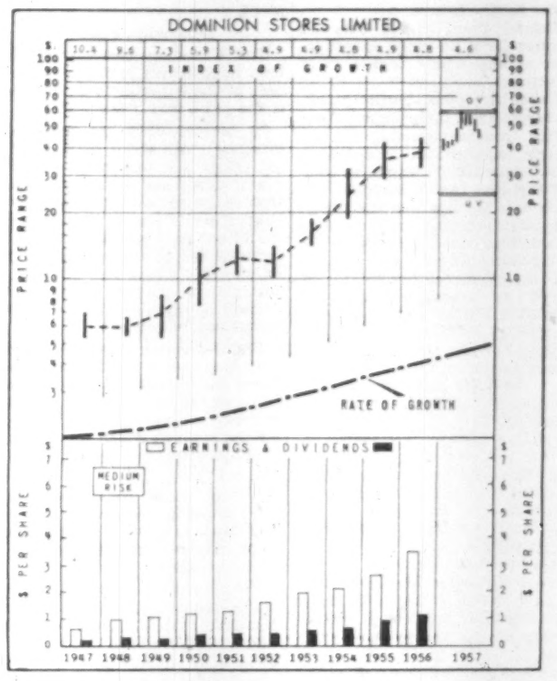
The market for galvanized sheets and tin plate is also restricted currently, reflecting lower house-building activity and the end of the canning season.

Dofasco's big expansion program is continuing on schedule. The last battery of 45 new coke ovens is expected to be in operation early in first quarter 1958, bringing total to 105. This will make company self-sufficient in coke.

A third oxygen furnace went into production late last year, doubling potential capacity for steel production by this method. A new $9 million blast furnace doubled Dofasco's iron-producing potential to 2,000 tons a day.

North American Cyanamid is continuing with its plans to build a $13 million anhydrous ammonia and urea plant adjacent to Dofasco's property on Hamilton Bay. Construction has not yet begun.

DOMINION FOUNDRIES & STEEL is an integrated steel producer—from iron ore to the finished product—that manufactures a wide variety of primary steel products, including plate, strip and castings. Early in 1957, it completed a seven-year, $88 million plant expansion, and is benefiting from its new European-developed oxygen process for producing steel ingots.



Dominion Stores

Dominion Stores Ltd., trading at recent $45¼, is 89% above UV level ($24), could rise 24% before reaching OV level ($56). Price is 12.7 times 1956-57 earnings of $3.55 a share. Yield is 2.76% at indicated annual dividend rate of $1.25 per share. Price in 1957 has ranged between high of $57½ and low of $39½.

Company has recently opened its first western Canada distribution centre, at Vancouver. The store, built at a cost of $1 million, is largest in the 332-store chain. It will be headquarters for 30 food markets which company plans to establish throughout the four western provinces.

Features of the Vancouver store include a rooftop parking lot and a counter restaurant, first in the Dominion chain.

Work will start on a second Vancouver store late this year or early in 1958. Within three years, it is expected that 10 to 15 Dominion Stores will be operating in Vancouver. Currently, 26 stores are under construction in Canada.

Construction is continuing on schedule on a new frozen food plant, adjoining company's warehouse in northwestern Toronto. This is to be opened early in 1958.

Sales of grocery and combination chain stores in Canada in the first seven months of 1957 were 13.4% higher than in January-July, 1956 (sales of independent retailers in this field were up 6.9%). For July alone, sales by the grocery and combination chains increased by 14% over a year earlier.

Rate of increase in Dominion Stores' 1957 sales is understood to be exceeding the national average.

DOMINION STORES is profiting fully from Canada's increasing population and growing consumer income which have offered excellent opportunity to chain merchandising methods. Under a planned program of expansion, this aggressive chain is gradually extending its operations and is gaining a strong hold in areas it has entered. Earnings have shown progressive annual increase with potential still large.

How to Read Nestor's Special Stock Charts

INDEX OF GROWTH: The rate at which the value of the equity behind the stock is doubling as determined by the growth rate at which it entered the year. A figure of 5.6 for the present year would indicate that at its current growth rate the equity value is doubling every 5.6 years.

PRICE RANGE: The annual high, low and mean price. Monthly ranges for the current year.

UNDERVALUATION AND OVERVALUATION PRICE LEVELS: Shown by the narrow horizontal lines above and below the stock's price range indicating price at which the particular stock is adjusted as underestimating or overestimating its future rate of growth. A stock showing a fast-growth rate will sometimes anticipate growth by two or three years. In this case it may not be so attractive a purchase relatively as some other fast-growing stock that is not anticipating its growth beyond the immediate present. Other factors such as rate of growth and investment quality will also enter into the comparison an investor will want to make.

Without these UV and OV levels, a current quotation of say, 55 or 75 would carry no significance regarding long-range value. The UV/OV levels also permit judgment as between one stock and another. They are not designated points of purchase or sale nor do they attempt to show what will be a stock's bottom or top figure in any given year.

RATE OF GROWTH: The rate as based on Nestor's tests at which the company is showing underlying or long-term growth. This will determine the price trend of the company's common stock over a period of years and in most instances the trend of dividend payments.

**Background and principles behind the selection by Nestor were discussed in a special article in FP, Jan. 10, 1953. A limited number of reprints are available on request.*

Company Reports

To assist readers in appraising and comparing company financial statements, The Financial Post has a uniform method of presenting corporation accounts. Variations from the companies' published reports are footnoted.

Food

MARVEN'S LTD., Moncton, N.B., consolidated net profit of $62,936 for 1956 was over five times 1955's $12,523.

Company maintained an aggressive sales program, and made many further improvements in plant and service facilities, says President J A. Chambers.

CONSOL. INCOME ACCOUNT		
Years Ended Dec. 31:	**1956**	**1955**
Net earnings	$196,258	$170,298
Less: Deprec.	97,760	99,664
Bond int.	9,370	10,380
Inc tax	27,692	47,731
Net profit	62,936	12,523
Less: Divds.	36,000	.....
Surplus for year	26,936	12,523
Times Bond Interest Earned:		
Before deprec.	20.09	6.41
After deprec.	10.18	6.80
Earnings per Share and Dividend Record:		
Cl. A†	$1.05	$0.21
Cl. A‡	0.63	‡
Paid	0.60	....
Cl. B‡	0.63	‡
None paid.		
‡No earnings available.		
†Before (after) participation.		
Shares o/s at Dec. 31:		
Class A	60,000	40,000
Class B	60,000	40,000

CONDENSED CONS. BALANCE SHEET		
As at Dec. 31:	**1956**	**1955**
Cash	$121,743	$33,872
Accts. rec. less res.	324,483	337,759
Inventories	535,088	556,724
Total curr. assets	1,001,316	928,355
Deferred assets	16,714	41,629
Due from assoc. co.	.....	130,770
Due from parent co.	63,766	.....
Fixed assets*	620,349	*643,970
Goodwill	33,037	33,037
Total assets	1,735,382	1,777,761
Inc. tax accr.	9,692	30,093
Accts., etc., pay.	219,736	268,471
Total curr. liab.	229,428	298,564
Due affil. cos.	6,815	.....
Funded debt	195,125	207,125
Capital stock	25,000	25,000
Capital surplus	2,802	2,802
Earned surplus	1,276,212	1,244,270
*After depr. of	1,070,828	1,002,492
Working capital	771,888	629,791

Metal Products

B. GREENING WIRE CO., Hamilton, net profit of $297,380 for year ended June 30, 1957, was 21.5% lower than previous year's $378,943.

Sales were higher but gain is not reflected in earnings due to lower profits on hardware products and a $42,230 increase in depreciation.

Insect screen cloth and hexagon netting continued to encounter severe foreign competition, says President H. B. Greening. This accounted for major part of the reduction in profits.

Strenuous efforts are being made to bring these products back to a profitable level. A merchandising program designed to swing the hardware trade from other types of insect screen cloth to aluminum, on which the company does not face the same kind of competition, is showing some initial success. Hexagon netting prices are being raised to at least a break-even level this year.

On the outlook, Mr. Greening states that a reasonably good market is indicated for products associated with the construction industry — at least throughout most of the coming year. Those products used by other Canadian industries appear to be assured of a steady market. On the other hand, prospects of continued severe foreign competition indicate tight markets for hardware and consumer lines and profit outlook in this regard is not encouraging.

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INCOME ACCOUNT		
Years Ended June 30:	**1957**	**1956**
Net earnings	$780,043	$879,876
Less: Depr.	202,913	159,683
Bond interest	13,750	15,250
Fed. & prov. tax	266,000	326,000
Net profit	297,380	378,943
Less: Com. divds.	171,000	142,500
Surplus for year	126,380	236,443
Times Bond Interest Earned:		
Before deprec.	36.73	57.70
After deprec.	41.97	47.23
Earnings per Share and Dividend Record:		
Common	$0.52	$0.66
Paid	0.20+0.10	0.20+0.05
Shares o/s at June 30:		
Common, n.p.v.	570,000	570,000

CONDENSED BALANCE SHEET		
As at June 30:	**1957**	**1956**
Cash & Dom. sec.	$5,183	$130,734
Accts. rec. less res.	1,002,920	1,003,254
Inventories	2,464,627	2,419,656
Total curr. assets	3,472,730	3,553,654
Prep. exp.‡	17,579	47,291
Fixed assets*	1,787,184	1,599,823
Total assets	5,277,493	5,200,768
Accts., etc., pay.	739,346	708,722
Inc. taxes	134,217	164,496
Bonds due	75,000	50,000
Total curr. liab.	948,563	923,218
Reserves	250,000	250,000
Funded debt	375,000	450,000
Capital stock	1,300,000	1,300,000
Surplus	2,403,930	2,277,550
*After depr. of	3,366,619	3,186,090
‡Incl. in curr. assets in co.'s report.		
Working capital	2,524,167	2,630,436

Food

EASTERN BAKERIES LTD., Saint John, N.B., net profit of $133,398 for year ended June 30, 1957 was 6% lower than previous year's $141,673.

INCOME ACCOUNT		
Years Ended June 30:	**1957**	**1956**
Net earnings	$435,485	$431,577
Less: Deprec.	192,016	174,254
Taxes	110,071	115,650
Net profit	133,398	141,673
Less: Pref. divds.	27,500	27,500
Com. divds.	15,000	15,000
Surplus for year	90,898	99,173
Earnings per Share and Dividend Record:		
Preferred†	$26.68	$28.33
Preferred	4.00+1.50	4.00+1.50
Paid	4.00+1.50	4.00+1.50
Common†	3.53	3.81
Paid	0.50	0.50
†Before (after) participation.		
Shares o/s at June 30:		
Preferred	5,000	5,000
Common	20,000	20,000

CONDENSED BALANCE SHEET		
As at June 30:	**1957**	**1956**
Cash	$55,878	$205,078
Accts. rec. less res.	160,573	121,518
Investments	150,406	116,865
Inventories	268,226	221,790
Total curr. assets	644,083	665,251
Prepd. exps.‡	35,926	41,106
Fixed assets*	936,494	779,287
Total assets	1,616,503	1,485,646
Accts., etc., pay.	318,076	245,647
Taxes pay.	41,176	73,650
Total curr. liabs.	359,252	319,297
Capital stock	500,300	500,300
Earned surplus	756,951	666,049
§After deprec. of	1,194,240	1,053,101
*Incl. in curr. assets in co.'s report.		
Working capital	284,831	345,954

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Textile Tariff Probe Is Thread of Optimism

The hardpressed Canadian textile industry — and particularly the cotton division — has new hopes for the future.

Behind them stands Ottawa's request for a thorough investigation of the whole textile tariff structure.

Canadian cotton textile manufacturers point their finger at four major troubles affecting the domestic industry: U. S. dumping, Tariff item 523(B), Japanese competition and Indian competition.

Here is the heart of the textile industry's problem and the recommendations to government for overcoming them.

It was presented as a brief (prepared by management of the **Hamilton Cotton Co.**), to a group of visiting MPs:

By all odds, the most serious threat to the cotton textile industry's domestic sales and orderly marketing is the widespread prevalence of U. S. "dumping" on the Canadian market.

Our industry is constantly being undersold by U. S. mills who "dump" their products here without regard for their true cost and an adequate markup at the origin of production.

Our industry has been encouraged by Finance Minister Fleming's directive to the Tariff Board last week for a thorough investigation of the textile tariff structure.

After considerable examination, and after lengthy hearings, we have no doubt a number of recommendations will be made which will support our industry's request for tariff revisions.

This will be time-consuming, however, and major revisions will have to be submitted to GATT (General Agreement on Trades and Tariffs).

Immediate Relief

Our situation calls for immediate relief—and we believe this is both possible and practical by changing the definition of "dumping."

Just how disastrous this surge of "dumping" has been is revealed in the impact on Canadian producers.

Statistics reveal that five Canadian cotton mills have closed since 1953, 10% of the Canadian spindle-age capacity has been liquidated, and employment in Canadian cotton mills has declined from 29,000 in 1950-51 to 21,000 now at work within the industry.

Many employees, in addition, are working reduced hours. Thus it will be seen that the Canadian mills have actually borne the brunt of over-production in the U. S. as our charts will show.

Before the war, Canadian mills supplied about 71% of the yardage of cotton fabrics used in Canada. But by 1950 this was down to 61%, and in 1956 it fell to 50%. Meanwhile, U. S. imports have risen from $15.5 million in 1939 to $145 million in 1956.

All this has occurred during a period of prosperity when the Canadian market for cotton goods is continuously increasing.

This is the unhappy paradox in which we enjoy fewer sales in an expanding home market.

The remedy for the problem is a return to the old "dumping" definition which was in force before 1948.

This would require that the export price of a product would include its full cost of manufacture, plus markup to cover selling and distribution costs, and a fair profit.

Determine Price

The Canadian customs would then have access to the cost records of the exporter to determine if the price was a fair one.

At present, they are supposed to know more about textile selling prices than anyone in the industry even knows. They are confronted with a hopeless task. Proper definition of "dumping" would not only give the domestic industry the protection the tariff intends, but would also allow the customs to collect the proper amount of duty on the current cotton textile imports.

Under the existing definition, the export price is often substantiated for customs purposes by a fictitious sale on the home market in order to provide token legality for the price at which the merchandise is "dumped" here in Canada.

Selling below production cost is a measurable concept and, once measured, it is more or less constant and does not vary daily like current market prices.

Under the pre-1948 definition of "dumping," distress merchandise from the U. S. cotton mills would not have been allowed into Canada at ruinous prices, and it would have been U. S. rather than Canadian mills that were forced out of business.

The consensus of opinion within this industry is that a revision in the wording of the "dumping" regulations, and in the application of Section 6A of the Customs Tariff Act, would together give substantial relief from unfair foreign competition.

These revisions would effectively aid the industry in regaining a larger percentage of its domestic market.

At the same time it would aid and benefit all secondary manufacturers, agriculture, and small business generally who must compete with the surpluses of U. S. mass production which find their way into the Canadian market.

Can Under-cut

Japan has a textile industry which is fully capable of making anything required in the Canadian textile market, and at prices that can under-cut any Canadian costs.

With wages only one-tenth of Canadian, it is easy for Japan to penetrate this market, and the speed of this penetration in some lines is very apparent from the charts on pages attached.

In general the more the labor content in the article, the easier it is for the Japanese to flood the market for that article.

This is not a problem for which there is any easy, general solution. The Japanese nation must export to live, as they have to import so much of their foodstuffs and industrial raw materials.

There are, however, two specific phases of the present situation which should be corrected:

1. Voluntary Limitations by Japan.

The Japanese have agreed to limit their textile exports to the U. S. to certain quotas for each kind and type of merchandise, in order not to ruin any one segment of the U. S. industry.

It has been stated as government policy that Canada expects the same treatment from Japan as is accorded to the U. S.

At present the Japanese are far from observing this principle, and the government should require them to conform to Canadian policy.

Japanese textile shipments to Canada, on a per capita basis, should be no higher than they are to the U. S.

2. Exercise of Trade Treaty Rights.

On some items the Japanese competition is so severe and extensive that nothing less than the exercise of Canadian rights under the commercial treaty with Japan will save the sections of the Canadian industry affected.

Cases seeking the assessment of fixed values for duty purposes on Japanese products severely damaging Canadian industry should be given earnest consideration.

Now Second

Before the last war, India had no cotton textile exports. Now she is second only to Japan as an exporter of cotton goods, ahead of such traditional exporters as the U. K. and the U. S.

Indian wages are lower even than the Japanese, about 1/12 of Canadian wages, and this gives her industry very low costs. In addition, Indian cotton mills enjoy a unique form of export subsidy.

As a nation India grows a great deal of raw cotton. To make sure this cotton is all processed in India, the Indian government has an export tax on raw cotton, with the result that the price for raw cotton to the mills in India is the world price less the amount of the export tax. There is no export tax on manufactured cotton goods.

The result is that should a Canadian mill wish to make cloth out of Indian cotton, to compete with Indian cloth coming into Canada, it would have to pay considerably more for the cotton than its Indian competitor.

In addition India is granted preferential tariff treatment as a member of the Commonwealth. This is not logical for Canada, as India does not, in return, grant Canada any preferential treatment.

Integrated Data Processing, Tool Which Can Spell Profit

(CONTINUED FROM P. 36)

savings are probable, the major advantages are in other areas.

Here is a tool whose full potential has not yet been determined.

Here is a tool which makes scientific management possible, which provides extreme speed and versatility.

It can provide greatly improved and simplified information for management, do complex scientific calculations with great speed and accuracy, and many other things.

If you can measure the extra profits through improved management, justification on the basis of increased profits will be possible.

But if EDP is not considered because immediate clerical savings cannot be realized, then only the least important advantage has been reviewed.

Unlimited Potential

The use of a properly designed EDP system with an electronic computer at its core makes management by exception possible.

For instance in any inventory control job, once a methods study has set inventory standards, it is no longer necessary, each month, to wait two weeks for an inventory report listing each item in detail.

Now it is possible, daily if necessary, to list only those items where action is required; and this can be done in a matter of hours rather than weeks.

This type of approach can, with suitable modification, be applied to every area of accounting and control.

If one lets his imagination soar, without the bias imposed by the limitations of present manual or semi-mechanical systems, it is not difficult to see that the potential of EDP is indeed unlimited. Here are just a few possible applications:

1. **Payroll** — from basic time information payroll cheques, cost distributions, etc. can be produced automatically.
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   (c) sales distribution,
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   (f) ledger posting.
3. **Inventory control.**
4. **Production control**—including optimum machine scheduling.
5. **Quality control.**
6. **Factory cost-analysis** and distribution.
7. **Scientific and design** calculations.
8. **Operations research.**

There are but a few applications out of many. There are undoubtedly many more.

When every accounting application is mechanized it is but a short step—a further integration — to produce financial statements automatically.

Thus the scope of mechanization of records and similar data is almost limitless because of the development and introduction of a great variety of data recording and processing machines.

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Council to Review Social Security

A conference on social security issues will be held in Ottawa in early January under the auspices of the Canadian Welfare Council.

The purpose: To take a fresh look at Canada's social security system and the council's own stand on certain policy matters.

About 35, selected for their special knowledge and key positions they occupy in relation to welfare programs, are expected to attend, reports R. E. G. Davis, executive director.

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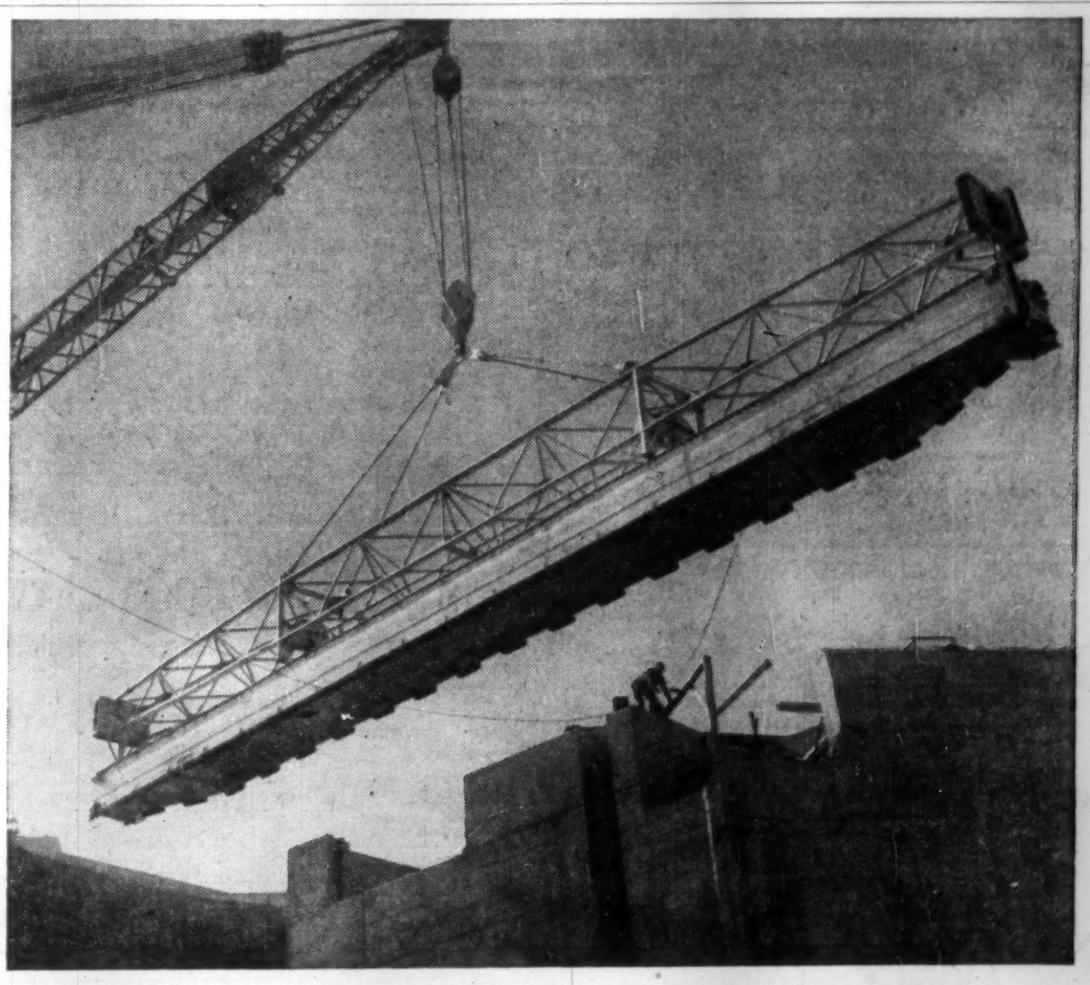

MLW builds Stop Logs for the St. Lawrence Seaway

Fabricated steel stop logs are slotted into the Seaway canal to create a watertight barrier and permit "dry" installation or repair of the permanent lock gates. MLW is building a total of 102 stop logs (each weighing 32 tons), together with 10 lifting booms, for the five sets of Canadian Seaway locks between St. Lambert, Quebec, and Iroquois, Ontario.

This fabrication of stop logs is an example of the diversity of operations carried out at MLW. In addition to serving Canada's railways as a foremost builder of diesel locomotives, MLW builds a wide range of industrial equipment and machinery. A completely equipped plant and years of manufacturing experience are available to MLW customers, and the Company has the resources and the knowledge of key industrial markets to enter additional product fields.

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W. B. BURNS,
Chief Agent.

Sept. 30, 1957.

AMERICAN MANUFACTURERS MUTUAL INSURANCE COMPANY

NOTICE OF APPLICATION FOR RELEASE OF ASSETS IN CANADA

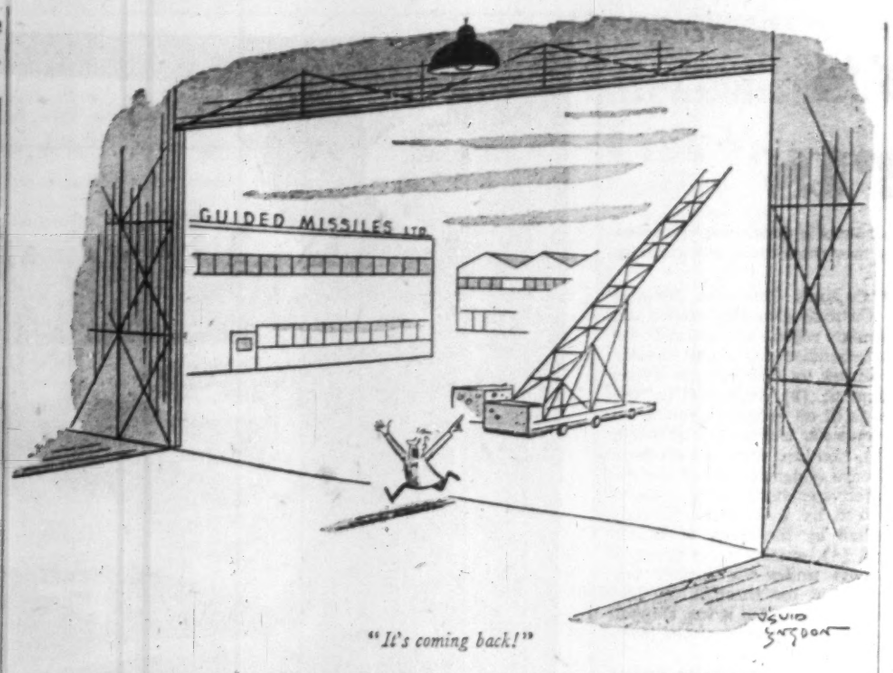
The American Manufacturers Mutual Insurance Company, a New York corporation, having decided to discontinue business in Canada will make application on January 20, 1958 to the Minister of Finance for the release of its assets on deposit in Canada under the provisions of Section 35, Foreign Insurance Companies Act, Chapter 125 R.S. 1952.

American Manufacturers Mutual Insurance Company has transferred its outstanding policies in Canada by means of a 100% reinsurance agreement dated December 31, 1956 to Lumbermens Mutual Casualty Company, an Illinois corporation registered and authorized to do business in Canada.

American Manufacturers Mutual Insurance Company's policy-holders in Canada, if opposed to said release of assets, are called upon to file their opposition with the Minister of Finance on or before January 20, 1958.

L. J. FLORA,
Resident Secretary.

Dated this 28th day of September, 1957.



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THE PICK OF PUNCH contains the best of the past 12 months of Britain's famous and witty weekly—and now, in the Muggeridge era, you don't have to be British to understand the humor. The hundreds of cartoons and 69 articles were selected by Nicolas Bentley. (Clarke, Irwin & Co., Toronto; $3.95.)

Books for Businessmen

TALENTS AND GENIUSES: by Gilbert Highet; Oxford University Press, Toronto; 347 pp.; $5.50.

The talents and geniuses of the title refer to a wide range of people as diverse as Colette and Samuel Pepys, Bach and Dylan Thomas.

But the book is concerned with far more than a series of notable individuals. Its discourses cover such topics as literary criticism, how to write the first few words of a novel, what it is like to be married to a prominent author, how to make the best approach to reading.

For anyone who has listened to Dr. Gilbert Highet on the radio, or read his widely-published work, it will be no surprise to find how varied are his tastes or how broad his erudition. In this book he shows once again how rewarding almost any subject can be when examined by a man of his wit and intellect.

Talents and Geniuses is an excellent title for the essays in this book. It only needs the briefest acquaintance with Dr. Highet's work to realize that it is almost the only title that can do justice to his comprehensive scope.

THE R.N.V.R. by J. Lennox Kerr and Wilfred Granville; Clarke, Irwin & Co., Toronto; 304 pp.; $5.

Here is a readable story of the evolution of the now-famous volunteer reserve of the Royal Navy.

While some of feats of members of the Royal Canadian Naval Volunteer Reserve are mentioned, this is basically a British book, of most interest to naval men and former "VRs."

The peacetime ups and downs of the RNVR—results of political manoeuvring—form a very interesting background to Canada's current defense policy seesaw, in which the fate of our own reserve forces will be decided.

MAN-EATERS OF INDIA by Jim Corbett; Oxford University Press, Toronto; 618 pp., $4.95.

For anyone coming new to Col. Jim Corbett's jungle stories this is the place to start. It's a collection of his three classic books: Man-Eaters of Kumaon, The Man-Eating Leopard of Rudraprayag, and The Temple Tiger.

The fact that the late Col. Corbett's work should merit reissue as a trilogy speaks for itself. Everything he has written on the colorful subject of man-eating tigers has a unique quality: It has been written by probably the only man who could have written it.

Col. Corbett, who died two years ago at the age of 80, spent a lifetime in India. He was brought up in the Kumaon Hills, recruited the local men to serve in both world wars.

When he writes of tigers it is with the plain approach of the naturalist who is an expert in the field. Strangely enough, it is his emphasis on precise facts that does most to give the stories their dramatic impact.

BRITISH RACING GREEN 1946-1956 by Louis Klemantaski and Michael Frostick; British Book Service (Canada) Ltd., Toronto; 60 pp.; $3.25.

A once-over very lightly of the fortunes of British sports and racing cars and drivers in the postwar period. For the motor buff, here's a collection of family album-type and action photographs accompanied by a generalized text to stir memories of English participation in the great road races of Europe. Much too short to satisfy the enthusiast.

GIRDLE ME A GLOBE by Eric Nichol; Ryerson Press, Toronto; 134 pp. $2.75.

The newest book by British Columbia humorist Nichol is a valuable antidote to the overly romantic approach of many travel books.

Nichol and his wife girdled the globe, starting on their wedding day and completing the journey eight months later. They traveled on a budget, and encountered the whole range of indignities that befall middle-class tourists—they became sick from the food, they spent sleepless nights in uncomfortable hotels, they suffered through silent meals with uncongenial shipboard companions, they lost their camera.

But there's a sugar coating to the bitter pill of Nichol's travel troubles. You won't want to go around the world after reading of his odyssey, but you will find plenty of chuckles in his woes.

LOVE AMONG THE CANNIBALS by Wright Morris; Longmans, Green & Co., Toronto; 253 pp.; $3.95.

The "cannibals" are the colorful people who inhabit the world of a Tin Pan Alley song-writing team—the "poor man's Rodgers and Hart." The accent here is on comedy, in both situations and dialogue.

Morris won the National Book Award for the most distinguished U.S. novel of 1956, The Field of Vision.

STREET OF RICHES by Gabrielle Roy; McClelland & Stewart Ltd., Toronto; 246 pp.; $4.50.

One of Canada's most successful authors reminisces gently about a French-speaking girlhood in St. Boniface, Winnipeg's neighbor.

By adult standards, nothing very much happened in her childhood and adolescent years. But by the standards of one who is growing up, life was crammed with color and excitement.

In Street of Riches, Miss Roy has not sought the same unity that marked her three earlier novels. Instead, she offers a series of vignettes of life on Rue Deschambault—a street where riches lie in the spirit and the emotions, rather than in material things.

ELEMENTARY ECONOMICS by J. Harvey; Macmillan Co. of Canada, Toronto; 496 pp.; $2.75.

This is an introduction to the science of economics, designed for students in English secondary schools and universities. It will also provide a simple groundwork for the general reader who seeks guidance in understanding today's economic problems.

A careful explanation is given of demand and supply analysis, to acquaint the beginner with the use of theoretical tools.

THE CENTURY OF THE SURGEON by Jurgen Thorwald; McClelland & Stewart Ltd., Toronto; 432 pp.; $6.50.

Modern surgery, taken for granted by most of us, is a product of the last 100 years or so. Only within that time have surgeons made such great, life-prolonging discoveries as anesthetics (the accidental finding of which opened the way to the other major developments in this field), plastic surgery, heart massage and the modern techniques of the Caesarian section and the appendectomy.

The story of that achievement is heightened by flashbacks to the barbarous methods of surgery which were used before anesthesia was discovered.

The volume is generously illustrated, and includes many reproductions of pre-nineteenth century pictures of surgeons at work.

AN INTRODUCTION TO JAPAN by Herschel Webb; Oxford University Press, Toronto; 145 pp.; $3.50.

This is a quick but authoritative survey of a country and a people too little known to North Americans. Main topics are U.S.-Japanese relations, geography, population, history, prewar and postwar governments, economic life; social and cultural life, fine arts, literature, religion and philosophy.

The book is sponsored by the Japan Society, a non-profit New York organization.

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E. L. NEAL

who has been elected to the Board of Directors of Gaspesia Sulphite Co. Ltd., Chandler, P.Q. Mr. Neal, who is general manager of the company, has also been appointed a vice-president. He is a graduate in mechanical engineering, from Queen's University.

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New Brazil Laws And Your Exports

V. L. CHAPIN
Commercial Secretary,
Rio de Janeiro.

A new tariff law came into force Aug. 14 which completely reforms Brazil's tariff system.

All duties are now ad valorem, the nomenclature of merchandise has been revised, and new measures of exchange control have been introduced. The most important provisions of the new law are summarized below. Details concerning regulations under the new law dealing with foreign exchange measures and the lists of Special and General Category goods will be included in a later report.

• Tariff Rates—The new tariff rates range from free entry to 150% of the external value of merchandise, including insurance and freight (the C.I.F. value). "External value" means the price at the time of export at which the merchandise is offered for sale in the wholesale market of the exporting country, plus packing and transport to port of shipment.

There is provision to establish a "specific equivalent," calculated in cruzeiros, for each item in the tariff. The Brazilian Customs may use this calculated amount to compare with the amount of the corresponding ad valorem duty after it has been calculated in cruzeiros; in any case of difference it is provided that the higher amount will be collected.

• Conversion Rate — The conversion rate of the external value will be fixed monthly, based on the variations of the import exchange market during the month previous to that expired. During the first year it will be adjusted every quarter and for the first quarter after the law is in force. The conversion rate may not exceed the cost of exchange in the previous first two import categories.

• Classifying Goods — Goods which at first sight appear to fall into more than one position in the tariff will be classified in that which involves the higher rate. Should it not be possible, however, to make any specific classification or to assimilate the goods with others, they will pay duties at the rate of 50% ad valorem.

• Country of Origin — The country of origin of merchandise is that in which it was produced and if it is the result of material and labor in more than one country, then it is considered as emanating from the country where it received substantial process of transformation, thus giving it new individuality.

• Duty on Packing — Packing which is not normally used, or which is of greater value in the national market than the contents are, is subject to duty according to its own classification.

• Exemptions on Baggage — Baggage declared by passengers is exempt from tax when in quantity which does not reveal a commercial objective and is comprised of clothing and objects for personal use or consumption, monogrammed bed and table linen, personal jewelry, printed books, wireless or television set, photographic or motion picture camera, typewriter, binoculars. (The last four must all be portable types and weigh not more than 10 kilos per unit.)

• Administration of Customs Policy — A Customs Policy Council of 13 people, consisting of government and trade representatives and with its own technical secretariat, has been set up to administer the customs policy and deal with all matters connected with tariff. It has also taken over the functions of the Commission of Similars which is now abolished.

• Consular Invoice Abolished—On Jan. 1, 1958, consular invoices will be abolished. The commercial invoice, containing details still to be established in regulations, will be visaed by the consular authority on payment of the corresponding emoluments and presentation of the license certificate issued by the Foreign Trade Bureau, or proof of exchange cover issued by the Exchange Bureau of the Bank of Brazil, as the case may be.

• Duty Exemption for Automotive Parts—Exemption from duty is accorded the complementary part of a unit to be completed in the country and imported by manufacturers of national vehicles with plans approved up to Dec. 31, 1957. Such exemption expires on June 30, 1959, after which there will be a reduction in the duty according to the degree of nationalization attained by the manufacturer.

• New Categories for Goods—Imported merchandise is to be grouped in two categories—general and special. "General" corresponds roughly to the previous Categories 1, 2 and 3 and "Special" to Category 5. Goods which were listed in the former Category 4 will be divided between general and special. The initial grouping will be established by the Minister of Finance within 30 days from Aug. 14.

• Exceptions — Except for newsprint, fertilizers, insecticides, wheat, petroleum, and certain essential equipment and parts, no imports may be made at an exchange rate lower than the one for merchandise in the general category.

• Financial Transfers Abroad —Financial transfers abroad will be conducted through the free exchange market, except for payment of government commitments, services rendered abroad covering imports of essential equipment, and amortization and interest on loans, credits and foreign financing registered with the Bank of Brazil.

• Elimination of Minimum Agios—A further simplification is the elimination of the minimum premium (agios) at the auctions. A minimum agio will remain only for the auctions of bilateral agreement currencies, in order to prevent indirect imports.

• Import Licensing — No import license will be required for products in the general category for which exchange cover has been obtained in the respective auction.

• Auto Import Auctions—Monthly auctions will be held to control imports of passenger cars weighing up to 1,600 kilos and having an F.O.B. value not exceeding U.S. $2,300 (or the equivalent in other currencies) within the maximum limits of $12 million for the first year and $8 million for the second. Car manufacturers and assemblers importing C.Kd. vehicles are granted duty reductions according to omissions in weight.

• Exchange Control Infractions —Exchange control infractions are subject to a fine of 100% of the value in the case of merchandise imported without a license or beyond the limits of the license, and to 100% of the difference in the event of any form of exchange fraud. Differences in price up to 10% and in weight or quantity up to 5% do not constitute exchange infractions.

• Single Import Tax—A customs clearance tax of 5% ad valorem has replaced all former taxes (except the excise tax) on imported goods. Most imports have been subject to an exchange tax of 10% ad valorem, and a social welfare tax of 4% on the C.I.F. value.

• Tax Discrimination — Any discrimination between the excise tax on national and foreign products is done away with, the former rates always prevailing.

• Customs Clearance Assured —Customs clearance under the former regime is assured for merchandise that is (1), already licensed by the Foreign Trade Bureau; (2), imported on the basis of an exchange certificate previously bid for and granted; (3), excluded from the previous license system provided the respective exchange cover is guaranteed by a document already issued by the Bank of Brazil, and (4), exempt from previous license under the former law and paid for through the free market, provided it was shipped before the validity of the present law.

(Reprinted from Foreign Trade)

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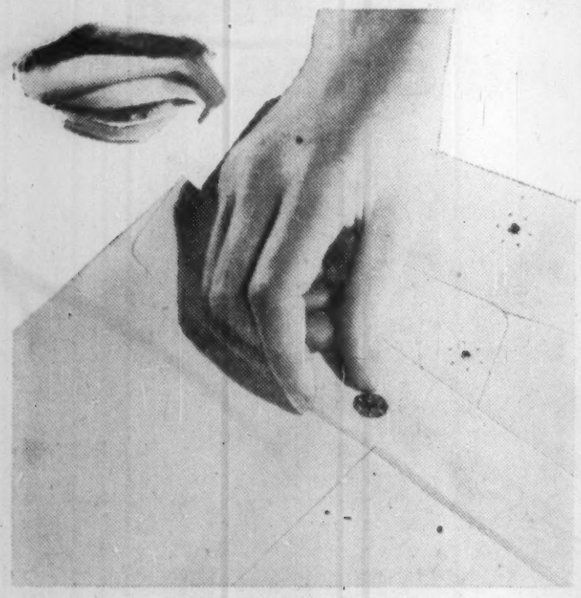

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Inflatable Chute Eases the Jump From Plane Crash

Jumping to the ground from the emergency doors of a crash-landed aircraft can be worse than a leap from a second-story window.

One answer to the problem is a new inflatable escape chute down which passengers and crew can slide.

Chutes have been designed before for aircraft but they normally required the assistance of men on the ground to hold the chute at the bottom.

This latest U.K.-made chute fits aircraft with exits up to 20 ft. from the ground. Air to inflate it is supplied by a compressor.

There is a special safeguard to prevent the chute from being inflated while still inside the aircraft.

Revise Electrical Code for Mines

Standards and requirements for installation and maintenance of electrical equipment in mines are to be revised, the Canadian Standards Association announces.

The Canadian Electrical Code, which has been in use for eight years, establishes minimum standards for adoption and enforcement by provincial governments and other bodies.

Changes will be put into effect early 1959 after the code is revised. Suggestions for revision and other proposals are being accepted by the CSA up to Jan. 31, 1958.

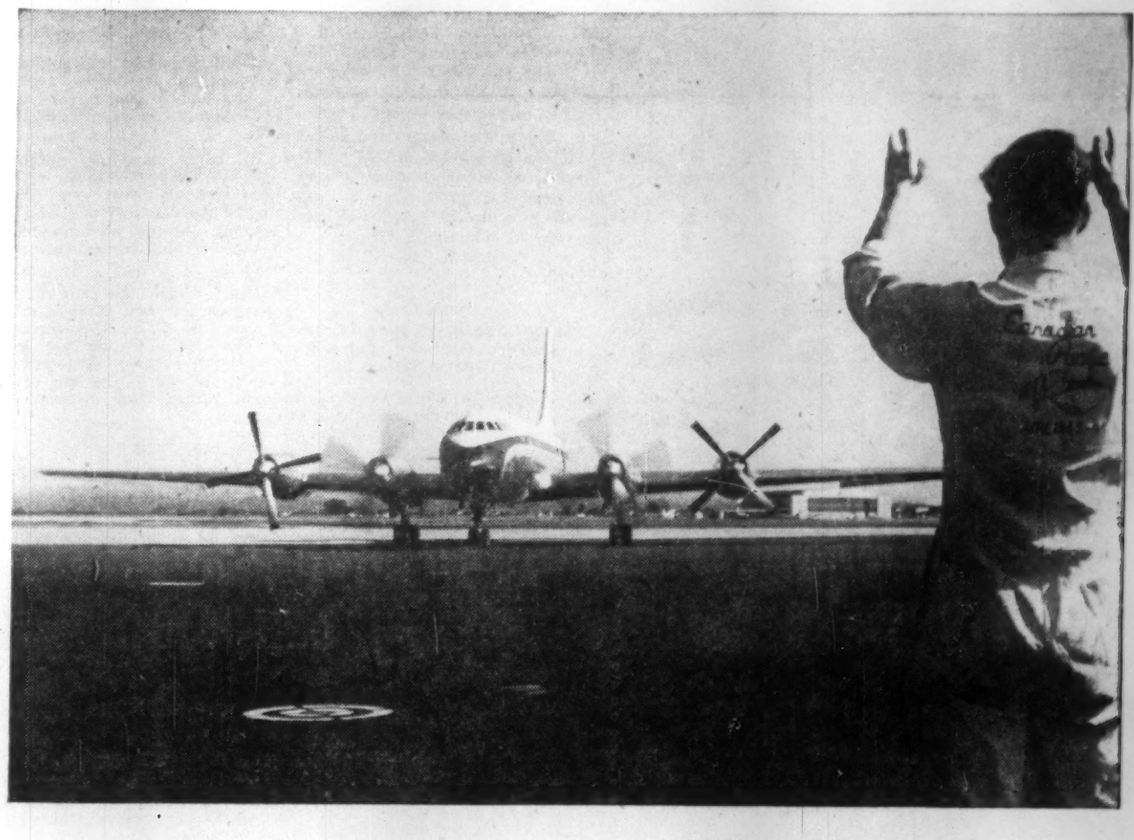
Hardware Views To Be Exchanged In Ont., Man.

The Canadian Retail Hardware Association plans a series of meetings in Ontario and Manitoba beginning in Sudbury, Oct. 15.

Purpose of the meeting: To encourage hardware retailers to exchange views on such subjects as trading stamps, premium deals, auctions, pedlars, sales by public utilities, etc.

The meetings will follow the pattern of those held recently elsewhere in Canada and which led to local hardware associations being planned in the Halifax-Dartmouth area, the Annapolis Valley, Quebec City and Greater Montreal.

The Ontario and Manitoba meetings will be held as follows: Sudbury Oct. 15; Timmins Oct. 16; Toronto Oct. 30; Ottawa Nov. 5; Huntsville Nov. 6; Kingston Nov. 7; Windsor Nov. 12; Mt. Forest Nov. 13; Winnipeg Nov. 19; Fort William Nov. 20 and Sault Ste. Marie Nov. 21.



BRITANNIAS WILL BRING NEW LOOK TO CANADIAN PACIFIC AIR ROUTES

Canadian Pacific Airlines to introduce world's biggest, fastest, quietest airliner to transpolar and intercontinental air routes early next year

The Bristol Britannia, the world's biggest, fastest and quietest airliner is coming into service on all major Canadian Pacific air routes early next year. These magnificent new aircraft will bring new standards of speed and luxury to Canadian Pacific passengers, flying over the North Pole on European routes, to and from South America and across the Pacific to Tokyo and Sydney.

Britannias are in commercial service with British Overseas Airways Corporation. They have also been ordered by Aeronaves de Mexico, Cubana de Aviacion, El Al Israel Airlines, Hunting-Clan Air Transport, Northeast Airlines, Royal Air Force Transport Command, and the British Ministry of Supply.

Two Britannia derivatives now building in Canada will also give a new look to the Royal Canadian Air Force. These are the long range maritime reconnaissance CL28 Argus and the military transport CL44, both being built by Canadair Ltd.

BRISTOL Britannia
THE BRISTOL AEROPLANE COMPANY OF CANADA (1956) LIMITED

Market Comment

What stocks and bonds are doing and what prominent observers say

Confidence has been further shaken recently by the stock markets' inability to even negotiate a moderate technical rebound from current depressed levels. Every time a rally appears to be getting under way buying power peters out.

There have been no new developments in the business picture that would assure any change from this current pattern. Although the 30-40% price erosion of many leading Canadian enterprises certainly makes these issues look a bargain at current levels and earnings outlook, there just aren't enough potential buyers willing to take on any kind of new commitments.

Failure of the fall business upturn to show so far in any buoyant fashion and in U.S. particularly continued disappointment in new autos and steel orders, is tending to keep a heavy restraining hand on potential buying power. The continued depressed prices are discounting the present belief that business slow-down will continue well into 1958.

* * *

BAKER, WEEKS & CO. (Montreal)

Increasingly, the unfolding pattern seems to suggest that the stock market has yet to feel the full impact of the ending of the long postwar boom, and that investment portfolios should be realigned accordingly. There is no suggestion that the sequel to this boom will be a collapse of 1929-32 dimensions but there are sobering reasons to think that the economic and financial problems are not of the 1948-49 or 1953-54 variety and that their consequences may not be fully discounted by the market's reaction to date, which has retraced less than one-quarter of the 8-year, 300% climb in the comprehensive Standard & Poor's price index of 425 U. S. industrial stocks. It may be less rewarding to compare the current 12.2/1 price-earnings ratio of the blue-chip industrial average with the peak ratio of roughly 15/1, than to contrast it to that of under 9/1 as recently as four years ago when the near-term outlook was clear for rising earnings. Actually, now that the continuity of inflation psychology has been so definitely cut, the stock market in coming months may have to contend with the twin depressants of a more pronounced shrinkage of earnings, plus a further narrowing of price/earnings ratios.

* * *

BONGARD & CO. (Toronto)

Main reasons for the recent low appraisal of stock values are a possible decline of defense expenditures, lower capital expenditures by corporations, a continuation of a tight money policy and lower profit margins in industries which have overexpanded.

There is not too much worry about defense orders. It is economy in defense spending rather than contraction that is desired. A moderate rise in new defense orders is expected in the rest of 1957 as various military programs are appraised and decided on. The slowdown in spending in recent months has been aimed at eliminating competing items and at certain items that might soon become obsolete. A. V. Roe of Canada appears to be in line to participate in the development of jet engines for the U. S. air force. New orders for such items will in great part offset the reported cutbacks and stretchouts in previous aircraft contracts.

There is more concern over the outlook for business capital expenditures. Third quarter expenditures held steady but it is now estimated that outlays in the fourth quarter will be lower. The projected decline is small but it would mark the first reversal of the uptrend since early 1955. The sharp rise of capital expenditures during these 2½ years has been a dynamic factor in the high rate of demand for raw materials and finished goods, since the money spent on new plant and equipment increases employment and consumption without immediately supplying more goods.

* * *

FORGET & FORGET (Montreal)

Many people wonder what is the exact reason or cause for the prolonged setback in the market. It is to be admitted that no special news has been published to which this reaction could be attributed.

To our mind, credit restrictions and anti-inflation policies undertaken by government authorities in this country and others are the main reasons for this falling off of stock prices. As a result, a wave of pessimism has spread throughout the public and such pessimism is bound to provoke still lower prices.

Nevertheless, we endorse the opinion of certain economists who think that certain investments can be made at current levels. We do not want to say that the market as a whole is a buy but careful study of the situation points out that if one has a bit of patience and uses a bit of common sense, purchase of certain securities at today's prices should prove profitable in a not too distant future.

* * *

BARRON'S; The Trader New York

The economy is in for a severe test through the winter.

Its stoutest segment, personal consumption expenditures, which represent roughly two thirds of the Gross National Product, have begun to falter, as shown by the first decline since March, 2%, in the seasonally adjusted retail sales total for September.

Developments in such major industries as oil, non-ferrous metals and steel continue to point to a lowering of business activity and to some contraction in employment.

Now accentuated by the unsettlement in the airplane industry, such prospects may bring a further reduction in consumer buying.

The combination of factors would appear to foreshadow a reduction in fourth-quarter profits and a revision in many cases of projected 1957 and early 1958 earnings estimates.

DISTRICT OF DIGBY, N.S., new issue of $200,000 5½% 1-20 year school debentures have been sold to a syndicate composed of **Wood, Gundy & Co., Eastern Securities Co.,** and **Royal Bank of Canada.** District received $96.681 per $100 debenture, a cost basis of 5.914%.

New Highs and Lows

During the week ended Oct. 11, four new highs and 109 new lows were recorded among the general stocks on Canadian stock exchanges. In the mining group there were two new highs and 126 new lows. In western oils there were 79 new lows.

GENERAL

New Highs — 1957

Can Foils A	Mackinnon St.
Dalex pfd	Ont Beauty Sy pfd

New Lows — 1957

Abitca Lum	Inland Cem pf
Algoma Steel	Inter Nickel
Aluminium	Inter Paper
Alum of Can 2 pfd	Inter Pete
Ang Cdn Pulp	Inter Util
Argus	Interp Pipe
Do B pref	Invest Synd
Ash Temple B pref	Do A
Assoc Artists	Kelvinator
Atlas Steels	Lafarge Cem A
Auto Electric	Lakeld Nat G Units
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Belding Cort	McColl Fron.
BA Oil	Mexican Lt
BC Elec 4¾% pfd	Midwest Ind
BC Forest	Do warr
BC Power	Milton Brick
BC Turf	Mitchell, Robt A
Brown Co.	Mont. Trust
Calgary Power	Nfld Lt & Power
Can Cement	Do rts
Can Iron	North Star Oil
Do 4¼% pref	Do warr 1956
Can Life	Ont Jockey C warr
Cdn Br Alum A	Do 6% pfd A
Do Rts	Orange Crush
Cdn Chem	Pembina Pipe
Cdn Collieries	Do 5% pfd
Cdn Food Prod	Photo Eng
Cdn Marconi	Powell River
Cdn Oil	Prem Iron Ores
Cdn Pacific	Quebec Tele
Cdn Petrofina pfd	Roe A. V.
Chart Trust	Russell Ind
Claude Neon B	Shawinigan pr N
Conf. Life	Do A new
Cons Min & Smelt	Sicks Brew
Cons Paper	Simpson
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Fleet Mfg	Webb & Knapp
Ford Motors (US)	West Plywood B
Ford (Can) B	Westminster Pap B
Foundation Co	G Weston 4¼% pfd
Gt Lakes Paper	Willson Stat pref
Gt West Life	John Wood A
Howard Smith Pap	Zeller 4½% pf
Imperial Oil	

MINING

New Highs — 1957

Cons Marcus	Macassa

New Lows — 1957

Advocate	Jack Waite
Ainsworth	Jeanette
Algom	Joburke
Alscope	Joliet Que
Amalg-Larder	Jonsmith
Anglo Rouyn	R. J. Jowsey
Ansil	Kilembe warr
Arcadia Nickel	Labrador
Do warr	L. Dufault
Baker Talc	Little L L
Barvue	Lomega
Base Metals	Mac Fie Ex
Baska	Maritimes
Beaver Lodge	Maybrun
Bethlehem Cop	Merrill Is
Bevcon	Midrim
Bornite	Mining Corp
Brilund	Mogul
Buffadison	Montgary
Bunker Hill	Mont Gary
Burnt Hill	N Formaque
Camp Chib	N Harricana
Cdn Dyno	N Kelore
Cdn Malartic	Newlund
Canalask	N Pac Coal
Can-Erin	N Senator
Capital Lith	Nickel Rim
Central Patricia	Nipissing
Cheskirk	Norgold
Chib Jaculet	Norpax
Conlagas	Norsym'e
Cons Cent Cad	N Rankin
Cons Fenimore	Northspan
Cons Howey	Do warr
Cons Min & Smelt	O'Leary Mal
Cons Nicholson	Opemisca
Cons Red Pop	Ormsby
Cons Sannorm	Pamour
Cowichan	Parbec
Cusco	Pardee
Delnite	Pater
Duvan	Pend Oreille
Duvex	Placer
East Min	Powell R
Elder	Pronto
El-Pen-Rey	Do warr
Eureka	Quatsino
Explor Alliance	Que Chib
Falconbridge	Que Man
Fatima	Que Met
Francoeur	Rainville
Frobisher	Rexspar
Gaitwin	Sharbot
Genex	Silver Ridge
Glenn Ur	Stadacona
Golden Manitou	Starratt
Goldfields	Surf Inlet
Granduc	Temagami
Gulch	Tiara
Gunnar	Trebor
Hard Rock	United Asb
Hollinger	Ventures
Int Nickel	Willroy
Irish Cop	

OILS

New Lows — 1957

Ajax	Hi-Tower
Amer Leduc	Hudson Bay Oil
Bailey-Sel A	Do rts
Banff	Humber
Britalta	Kenare
Calalta	Liberal
Calvan	Long Island
Canada Oil Lands	Marigold
Do warr	Medallion
Cdn Atlantic	Merland
Cdn Chieftain	Merrill Pet
Cdn Dec warr	Midcon
Cdn Dev	Monarch
Cdn Fortune	Nat Pet
Cdn High Crest	N Bristol
Cdn Homestead	N Chamb'n
Cdn Husky warr	N Cont
Cdn Prospect	N Richfield
Canso Pet	N Superior
Canso Prod	North Can
Cent Del Rio	Northland
Charter	Nuco
Claybar Uran	Okalta
Common Wealth	Peace River Pet
Cons Allen	Permo pfd
Cons Dragon	Peruvian
Cons Mic Mac	Petrol
Cons Peak	Phillips
Cons West Pet	Prairie
Cree	Royalite
Do warr	Sapphire
Dalhousie	Do 5% debs
Devon Palmer	Scurry Rainb
Dome	Spooner
East Cdn	Triad
Gaspe	Vanalta
Gen Pet A	Wayne
Gt Plains	W Burns
Gridoil	York Oils

Record of Financing

Sales by Municipalities, Provincial and Dominion Governments. Offerings of Corporation and Securities.

DOMINION

Government of Canada Treasury Bills — Due Jan. 3, 1958, $125,000,000. Issued Oct. 3, 1957. Sold at $99.051 to yield 3.84%.

MUNICIPAL

Township of Tibury North, Ont. — 5½% debentures, due Oct. 1, 1958-77, $188,736. Issued Sept. 7, 1957. Bought privately by J. L. Graham & Co. Ltd.

Town of Acton Vale, Que. — 5½% debentures, due Oct. 1, 1958-67, $135,000. Issued Sept. 23, 1957. Sold at $98.06 to Belanger Inc.

Parish of St. Felix-de-Cap-Rouge, Que. — 5½% debentures, due Oct. 1, 1958-67, $25,000. Issued Sept. 23, 1957. Sold at $97.88 to Garneau, Boulanger, Ltee.

School Commission for Mun. of Village of St. Joseph, Que. — 5½% debentures, due Sept. 1, 1958-77, $340,000. Issued Sept. 23, 1957. Sold at $98.01 to Credit Anglo-Francais, Ltee.

Town of St. Vincent-de-Paul, Que. — 5½% debentures, due Oct. 1, 1958-67, $529,800. Issued Sept. 23, 1957. Sold at $95.09 to L. G Beaubien & Cie Ltee.

School Commission for Mun. of Port-Alfred, Que. — 5½% debentures, due Aug. 1, 1958-77, $285,000. Issued Sept. 24, 1957. Sold at $95.77 to Demers, Adam & Martin, Ltee and Gaston Laurent, Inc.

School Commission for Mun. of Fairie, Que. — 5½% debentures, due Oct. 1, 1958-72, $80,500. Issued Sept. 25, 1957. Sold at $98.17 to Belanger, Inc.

School Commission for Mun. of Hauterive, Que. — 5½% debentures, due Oct. 1, 1958-67. $469,000. Issued Sept. 26, 1957. Sold at $94.01 to Garneau, Boulanger, Ltee, La Corporation de prets de Quebec, J. E. Laflamme, Ltee, and Grenier, Ruel & Cie, Inc.

Township of London, Ont. — 6% debentures, due Sept. 30, 1958-77, $2,208,440. Issued Sept. 26, 1957. Bought privately by Midland Securities Corpn. Ltd.

City of Saint John, N.B. — 5½% debentures, due Oct. 15, 1969-77, $800,000. Issued Oct. 1, 1957. Sold at $96.618 to Nesbitt, Thomson & Co. Ltd., Dominion Securities Corpn. Ltd., Bank of Montreal, W. C. Pitfield & Co. Limited and Winslow & Winslow Ltd.

Town of Barrie, Ont. — 5¾% debentures, due Nov. 1, 1958-77, $455,538. Issued Oct. 2, 1957. Sold at $98.08 to Bell, Gouinlock & Co. Ltd. and Dominion Securities Corpn. Ltd.

CORPORATE

Riverside Silk Mills, Ltd. — 6½% first mortgage sinking fund bonds, series "A" (carrying share purchase warrants, due Sept. 15, 1972, $200,000. Issued Sept. 26, 1957 Offered at $100.00 by Deacon Findley Coyne Ltd.

Radley Investments Ltd. — 6½% first mortgage sinking fund bonds, series "A," due May 1, 1960-79, $2,550,000. Issued Oct. 2, 1957 Bought privately by Dominion Securities Corpn. Ltd.

Radley Investments Ltd. — 6½% convertible debentures, due Sept. 15, 1962, $1,000,000. Issued Oct. 2, 1957. Offered at $100.00 by Dominion Securities Ltd.

Hendershot Paper Products Ltd. — 6½% first (closed) mortgage sinking fund bonds, to mature Sept. 1, 1977, $1,000,000. Dated Sept. 1, 1957. Offered at $100.00 plus accrued interest to yield 6½% (carrying share purchase warrants at the rate of 20 per $1,000 bond) by Harrison & Co. Ltd.

Hendershot Paper Products Ltd.—6¾% general mortgage sinking fund bonds, series A, to mature Sept. 1, 1982, $500,000. Dated Sept. 1, 1957. Offered at $100.00 plus accrued interest to yield 6¾% (carrying share purchase warrants at the rate of 30 per $1,000.00 bond) by Harrison & Co. Ltd.

THE INVESTMENT FUNDS

McLean, Budden Portfolio Unit Value Down 12.4%

MONTREAL (Staff) — **McLean, Budden Ltd.** investment management fund total assets (market value) on Sept. 30, 1957, were $865,554 off 8.1% from $941,702 at June 30.

Value per unit was $13.18 at the end of September, down 12.4% from $15.04 per unit at the end of the second quarter. There were 65,695 units outstanding compared with 62,621 three months earlier.

Company reports security prices have declined sharply in the last three months extending the downward correction from the "somewhat optimistic levels of early 1956."

"We do not view this development with alarm nor do we anticipate that the long-term growth of the North American economy will be unduly interrupted," it is stated in the quarterly report to shareholders.

Here are the details of portfolio changes:

	Shares	Shares
Preferred:		
B.C. Electric 5%	...	—200
Industrial Accept ce 5½%	...	—100
Common:		
Union Gas	[illegible]	—75
B.A. Oil	700	—100
Steel Co. of Canada	400	—50
Colorado Interstate Gas	100	—200
Tennessee Gas Transm.	400	—100
International Utilities	400	—400
Trans-Canada Pipelines	200	—150
Quebec Natural Gas	140	—140
Westcoast Transmission	50	—50
Interprov. Pipe Line	200	—100
Dow Chemical Co.	300	—92
International Paper	200	—100
Powell River	500	—150
St. Lawrence Corp.	500	—[illegible]
U.S. Steel	300	—50
Canada Cement	500	—100
Ford of Canada A	200	—50
Loblaw Cos. A (1)	100	—100

Note: Fund also sold 200 Power Corp. rights.
(1) Including 45 shs. converted.
(2) Units with 2 shares of stock per $100 debenture.

Bonds	Amount held at Sept. 30 $	Change since June 30 $
Quebec Hydro Commission 4% ('76)	...	—15,000
CPR 4% ('69)	...	—10,000
Loblaw Groceterias 4¼% ('76) converted	4,000	—1,000
Loblaw Groceterias 4¼% ('76) convertible	5,000	+5,000
Simpson's Ltd. 5% 1976 convertible	10,000	+5,000
Trans-Canada Pipe Lines 5.85% 1987 (2)	15,000	+5,000
Quebec Nat. Gas 5¾% 1985 (2)	5,000	+2,000

Our University Enrolment Lags

WELLAND — Canadian rate of university enrolment is about five per 1,000 of population while the U.S. figure is 15 per 1,000 and Russia about 20 per 1,000, S. H. Deeks, executive director, Industrial Foundation on Education, told a teachers' convention here last week.

He described Canada's record in retaining young people in the country's educational system as "very poor" because only about 7% of the students enrolling in the first grade finally graduate from university.

Hospital Insurance Examined at CPPA By W. M. Mercer

The address on national hospital insurance and its costs given before the industrial relations section of the Canadian Pulp & Paper Association and reported in **FP** Oct. 5, p. 65, was made by William M. Mercer, president of **William M. Mercer Ltd.,** employee benefit plan consultants.

It was not, as reported, given by the company's vice-president and actuary Laurence E. Coward.

GAS FOR LINDSAY

Work on the 33-mile gas transmission line from north of Newcastle to Lindsay, Ont., is progressing on schedule with completion date, Oct. 31. Contracts for construction of the distribution system in the town of Lindsay have been let to three companies and work will start immediately. The three contractors are: **F. E. Shaw Ltd., H. B. White Contractors Ltd.,** and **R. B. Somerville. Consumers' Gas Co.** will be the gas distributing company.

Talent Lined Up For B. C. Festival

From Our Own Correspondent

VANCOUVER—Arrangements for leading talent and directors for Vancouver's Festival of Arts in July, 1958, have been completed by Nicholas Goldschmidt, artistic director, just returned from a two-week tour of Europe and New York.

Among the prizes: Marcel Marceau, French pantomimist; Brig. Alisdair Maclean, who staged Edinburgh's military tattoo; Douglas Seale, U. K. theatrical director, and the Metropolitan Opera's George London who will sing the lead in Don Giovanni to be directed by Dr. Gunther Rennert.

USEFUL BOOKLET

The Association of Professional Engineers of Ontario has published a booklet about itself and how it serves its more than 16,000 members.

Use steel tubing? Use aluminum?

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"Business Bad?"

"On the contrary — we're doing better than ever."

"Then what's the idea of closing your warehouses?"

"New distribution set-up. Everything goes direct — factory to retailer — by air."

"Sounds streamlined — but expensive. *We* couldn't stand extra freight costs."

"Just what we thought. But the figures show we're actually saving."

"Does warehousing costs *that* much?"

"There are other savings, as well. Insurance, inventory costs, packing — and we've almost eliminated production overtime."

"Food for thought. Maybe I'll get the costing department to go into *our* figures."

It may be that an investigation into *your* distribution costs would show advantages in using Air Freight. So many factors are involved that simple comparison of freight charges seldom tells the whole story. Your TCA Air Freight representative will gladly help you evaluate your problem. Simply call your TCA Office.

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ANOTHER LARGE INSTALLATION
of
CURTAIN WALLING
by
WILLIAMS & WILLIAMS

"Wallspan is going up all over Canada"

Pictured on the right is the beautiful new B. C. Electric Head Office building in Vancouver . . . another large installation of Wallspan. This new lightweight insulated curtain-walling drastically reduces the tremendous weight of brick, stone or concrete. Wallspan can be used in almost any type of construction giving you speed of erection and a bonus of extra rentable floor space, plus a building with smart, contemporary style.

* B. C. ELECTRIC BUILDING, VANCOUVER, B. C.
ARCHITECTS: THOMPSON, BERWICK & PRATT
CONTRACTORS: JOHN LAING & SON (CANADA) LTD.

B. C. ELECTRIC BUILDING, VICTORIA, B. C. (COMPLETED 1955)
ARCHITECTS: SHARP & THOMPSON, BERWICK, PRATT
CONTRACTORS: COMMONWEALTH CONSTRUCTION LTD.

Shown above is the completed B.C. Electric Building in Victoria constructed with Wallspan and utilizing aluminum sun shades.

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THE WEEK'S QUOTATIONS

Quotations here listed are the official, exchange prices for listed stocks including curb market quotations. For unlisted stocks, quotations by unlisted dealers are given. The Financial Post cannot accept any responsibility for these quotations.

Montreal and Toronto Winnipeg, Calgary and Vancouver

Bid and Ask quotes of Toronto and Montreal exchanges up to press time are published on page 44

Industrial Stocks

WEEK ENDING OCTOBER 11, 1957

Range 1957 High	Low	Div. Y'ld R'teOct. 11 $	%	Company	Sales	Last Oct. 4	Week end. Oct. 11 High	Low	Close or Latest
1.50	.38			Abitca Lum.	27060	.46	.49	.38	.49
35½	25	1.70	6.2	Abitibi	3840	28½	28½	27	27¾
24¼	21¾	1.12½	5.0	Do. 4½% pref.	675	23½	23½	22	22½
9¼	7	.50	6.3	Acadia Atlan.	1675	8	8½	8	8
93	83	5.60	6.0	Do. 5% pref.	85	88	88	83	83
21	17½	1.20	6.8	Do. A	370	17¾	18	17¾	17¾
..	..	•	..	Admiral	nil	..	..	..	..
8¾	6½	1.45	..	Agnew Surp.	nil	..	B6½	A8¾	8½
9¼	8½	.55	6.5	Do. pref.	nil	..	B8½	A9½	8½
1.85	1.20	..	..	Albt. Dist.	4400	1.40	1.45	1.35	1.40
1.70	1.20	..	..	Do. V.T.	1300	1.30	1.30	1.30	1.30
21.50	12.75	..	..	Albt. Gas Tr.	8530	16.13	15.75	14.00	14.25
40½	24½	1.25	..	Algoma Steel	14997	28	28	24½	25½
50¾	30½	•.32½	..	Aluminium	47350	35¼	35	30¾	31½
23½	20½	1.00	4.8	Alum. of C. 1st pf.	350	21¼	21¼	21	21
48½	43½	2.25	5.2	Do. 2nd pf.	460	44¼	44	43½	43½
3.25	1.95	..	..	Analogue	100	1.95	1.95	1.95	1.95
6.00	3.85	•.20	..	Andian Nat.	13	3.85	†3.80	†3.80	†3.80
30	20	1.50	..	Anglo Can. Oils (Brandon)	nil	..	B20	A25	20
39½	26½	2.00	7.5	Ang. Cdn. Pulp	990	27¼	27	26½	26¾
51½	47	2.60	5.8	Do. pref.	360	48	48¼	48	48
46	36	2.25	6.0	Ang. Can. Tel. pf.	205	38	38	37½	37½
10¼	5½	1.52½	8.8	Ang. Nfld.	7260	6	6	5½	5¾
..	..	11.25	..	Angl.-Scand. Invest.	nil	..	..	..	11
25½	22½	1.20	5.2	Anthes. Imp.	15	23	23	23	23
40	22	..	..	Arcan Corp.	7200	34	31	29	30
20	14½	.80	5.3	Argus	3290	16	16	14½	15
50¾	40	2.40	5.8	Do. pref. A	120	40½	42½	40¾	41½
43	37	2.50	6.8	Do. B pref.	50	†38½	37¾	37	37
..	..	•1.00	..	Aro Equip.	nil	..	..	..	25
35	25¼	1.00+1.60	..	Asbestos	2228	27¾	28½	27¾	27¾
4.50	3.00	..	..	Ash Temple	nil	..	B3.00	A3.00	3.00
94	90	6.00	6.7	Do. A	nil	..	..	A90	90
9¼	8¾	.65	7.8	Do. B	100	8¾	8¾	8¼	8¾
12¼	12	.60	4.9	Ashdown Hdwe. A	nil	..	..	..	†12¼
12¾	10	.72	6.3	Do. B	200	11½	11½	11½	11½
11¼	6¼	..	..	Assoc. Artists	1600	7¾	7¾	6¾	6¾
15¼	6½	..	..	Do. Warr.	262	8.50	8.50	7.50	7.50
119	90	..	..	Do. Deb.	334	90	91	90	90½
..	..	•4.00+$••2.00	..	Assoc. T.&T.A. pf.	nil	..	..	..	101
7	3	..	..	Atlan. Accept.	nil	..	B6½	A7	6½
14	13	1.10	8.5	Do. pref.	nil	..	B14	A17	†13
29¾	16½	$1.00+.25	..	Atlas Steels	7310	18	18½	16½	17
16	12¼	1.60+1.25	..	Auto Electric	200	13½	13	12¼	12¼
11¼	10	.50	4.5	Do. A	nil	..	..	A11	11
4.75	2.75	•	..	Auto Fabric A	nil	..	B2.50	A3.50	†2.75
1.10	.50	•	..	Do. B	1000	1.00	1.00	1.00	1.00

B

43½	37	1.20+1.30		Bk. Can. Nat.	950	37¼	37¼	37	37
54¾	38½	1.40+1.20		Bk. Montreal	6831	43¾	43½	40	40
60	51¾	2.00+1.20		Bk. N. Scotia	1166	53¼	54½	52	52¾
..	..	3.20+$2.10		Barber-Ellis	nil	..	..	..	..
..	..	3.50		Do. pref.	nil	..	..	..	..
5	4¼	..	..	Barcelona	nil	..	B3¼	..	†3¾
9	8½	1.00	11.8	Bates & Innes A	nil	..	B8½	A9	8½
60	44	3.00+$.50		Bathurst Pr. A	50	45	44	44	44
40	23	1.50	..	Do. B	nil	..	..	B23½	23¾
..	7½	4½	..	Beatty Bros.	45	..	4½	4½	4½
30¼	29¼	1.10	..	Beaubran	nil	..	B26¼	A27¼	30¼
20	16	1.00	6.1	Beaver Lumber	500	17	16½	16½	16½
20	16	1.00	5.5	Do. A	nil	..	B16¼	A18½	18¼
25	25	1.40	5.0	Do. pref.	nil	..	B19	A25	25
10½	9	1.15	..	Beldng Cort.	525	10½	10½	9	9
13	10½	.70	6.7	Do. pref.	nil	..	B10½	A11	10½
5	5	..	..	Belgium Stores	nil	..	B5	A8	5
14	12½	1.00	8.0	Do. pref.	nil	..	B12½	..	12½
46½	38¼	2.00	5.1	Bell Telephone	28183	39¾	39½	38¾	39
7	4¾	.40	6.2	Biltmore Hats	100	6½	6½	6½	6½
13	10½	1.00	9.1	Do. pref.	200	12	11¼	11	11
50	50	2.40+1.40		Bird Constr.	10	50	50	50	50
12	12	.40	7.0	Blue Ribbon	nil	..	B12	A13	12
38½	35	•$12.50	..	Do. pref.	nil	..	..	A35	35
6.00	4.00	•$12½%	..	Bowater Pap.	375	4.30	4.25	4.00	4.00
45	40	2.50	6.2	Bow't'r N.S. 5% pf.	230	40	40½	40½	40½
49	42¾	2.75	6.2	Do. 5½% pref.	175	44½	44½	44½	44½
16	12½	$1.00	..	Bowes Ltd.	nil	..	B14	A15	13½
10¾	8	.60	7.1	Boyles A	nil	..	B4	A9	8½
2	7½	..	..	Do. B	nil	..	..	A7½	7½
18	13	1.00	5.7	Brant Cord A	80	17½	17½	17½	17½
12¼	9	.50	3.8	Do. B	nil	..	B10	A10½	†13
10	7½	$.50+1•	..	Brazilian Tr•	12698	7¾	7¾	7¾	7¾
96	88½	6.00	6.3	Do. pref.	nil	..	B92	..	94½
18	18	1.20	6.8	Bridge & Tank	nil	..	B17	A17¾	18½
49½	43	2.90	6.5	Do. pref.	410	46	47	46	46
8.90	4.10	..	..	Do. Warr.	532	7.00	7.05	7.00	7.00
19	15½	.50	..	Bright T. G.	nil	..	B16½	A17	17½
20	19	1.15	5.8	Do. 5% pf.	nil	..	B15	A21	20
33½	29¾	$1.00+1.50		Br. Am. Bk. Notes	nil	..	B31	A34	31½
57½	37½	1.00	2.6	Brit. Amer. Oil	18384	43¾	42¾	37½	38½
8	7.5	4.00	5.3	B. C. Elec. 4% pf.	158	76¼	76	76	76
43	38½	2.12½	5.5	Do. 4¼% pref.	5	39	38½	38½	38½
47	40	2.25	5.6	Do. 4½% pref.	250	41	41½	39	40
98¾	86	4.75	5.5	Do. 4¾% pref.	100	88	87¾	86	86
50	44¾	2.50	5.4	Do. 5% pref.	605	46	46	45½	46
13¾	8¾	.50	5.8	B. C. Forest	5695	9¾	9¾	9¼	8¾
17½	13	.75	5.8	B. C. Packers A	111	13	13	13	13
17½	12	$1.00	..	Do. B	nil	..	..	B12½	†12
53	36¼	1.40	3.8	B. C. Power	16644	39¾	40¼	36¼	37
47¼	38	2.00	5.2	B. C. Tele.	1594	39	40	38½	38½
1.10	.85	..	..	B. C. Turf	1100	.90	.90	.85	.90
17¾	11¾	•1.00	..	Brown Co.	2360	13	13	11¾	11½
8	6	$1.20	..	Bruck S. Mills A	50	6½	6½	6½	6½
3	2	..	..	Do. B	nil	..	B2	A3¼	2½
37	29½	1.80	5.7	Build Prod.	380	32	32½	31¾	31¾
7¼	6	.50	8.2	Bulloch's A	nil	..	..	A6¼	6¼
5¼	4	$.35	..	Do. B	nil	..	B6	..	16
15½	11¼	$.45+.25	..	Burlington St'l	100	12	11¾	11¾	11¾
12	9	.60+$.10	..	Burns & Co.	1070	10	10	9¾	10
7¾	6¾	.45	6.2	Burrard D. D. A	nil	..	B6¾	A7¼	7¼
3.25	1.50	•	..	Butterfly Hos.	nil	..	B1.80	A2.50	2.00

C

22	21	$1.50	7.1	Caldwell Lin. 1st pf.	nil	..	..	A23½	21
..	..	•	..	Do. 2nd pref.	nil	..	..	..	13
80	58½	2.00	3.4	Calgary Pwr.	1300	60	61¼	58¼	58½
103	95	5.00	5.2	Do. 5% pref.	125	95	96	96	96
Canada									
3.50	2.50	.10	4.00	Canada Bread	50	3.15	2.50	2.50	2.50
55	50	2.50	5.0	Do. pref. B	nil	..	B42	A53	50
30½	24	1.00	4.2	Canada Cement	2510	25	25½	24	24
29	26	1.30	4.8	Do. pref.	1514	27¼	28	27	27
8½	5¾	.10	..	Can. Cr. & C. Stone	180	7	6	6	6
24	20¼	1.20	5.5	C. & D. Sugar	3355	21	22	20¾	21¾
14	14	$1.00	..	Can. Floor B	nil	..	..	..	14
13	12	.40	4.0	Can. Foils	50	17	15½	15½	15½
17½	12½	.60	4.3	Do. A	520	†18	17½	17½	17½
13	12	..	..	Can. Forg.	nil	..	B17½	A17½	†13½
28	24½	1.50	6.2	Do. A	nil	..	B21½	A30	24½
43	27¼	1.50	5.5	Can. Iron	1825	29½	29	27¼	27¼
111	94	4.25	4.5	Do. 4½% pref.	60	192	94	94	94
175	120	$4.60	..	Can. Life	25	125	120	120	120
10	8	..	..	Can. Machinery	nil	..	B8½	A8½	8½
55	47½	2.00+$•	..	Can. Maltings	20	47½	†46½	†46½	†46½
24¼	22½	1.17	5.1	Do. 4½% pref.	185	23	23	23	23
39½	34	$1.62½+.12½	..	Can. Packers A	1050	35	36	35	38
37¼	34	$1.62½+.12½	..	Do. B	345	34¾	34	34	34
90	73	$3.45+.10	..	Can. Perm. Mtge.	135	77	77	76	78
94	88	4.40	5.0	Can. Safeway pref.	1	88	88	88	88
40½	29	1.00	2.9	Can. Steamships	125	35¾	36	34¼	34¼
12½	10½	.62½	5.2	Do. pref.	160	11¼	12	11	12
21	17¼	$.75+•.15	..	Can. Vinegars	nil	..	B20½	A21	20¾
..	..	..	..	Can. West Cord A	nil	..	..	..	8½
..	..	..	..	Do. B	nil	..	..	..	..
21	15	4.00	1.9	Can. W. Cable A	nil	..	..	..	210
..	..	.80	5.3	Do. B	325	15	15½	15	15
Canadian									
152	125	1.00	0.7	Canadian Arena	nil	..	B151	..	152
5	4	•	..	Cdn. Bakeries	nil	..	B5	A6	5
56	40¾	1.40+$1.20		Cdn. Bk. Com.	3009	44½	44	41	41
28	23½	1.50	6.3	Cdn. Breweries	7150	25	25	23¾	24¼
29¼	23½	.25	4.9	Do. pfd.	1980	25¼	25¼	24¼	24¼
19	10	..	..	Cdn. Br. Al. A	2015	11¼	11½	10	10½
.25	.05	..	..	Do. Rts.	30477	.19	.19	.05	.08
30¾	25½	$1.75+.25	..	Cdn. Bronze	325	26	26½	25½	26¼
103	100½	5.00	5.0	Do. pref.	nil	..	..	..	100½
14½	13¼	.75	5.6	Cdn. Canners A	810	14	13¾	13½	13½
18¾	13¾	$.50+1.15	..	Cdn. Celanese	3037	14	13¾	14	14
26	21½	1.75	6.5	Do. pref. $1.75	715	27	27¼	27	27
16¾	15	1.00	5.9	Do. $1.00 pref.	nil	..	B15¾	A20	†17
9	5	..	..	Cdn. Chem.	6430	5¾	5¼	5	5
7.25	4.25	•	..	Cdn. Collieries	8176	4½	4.50	4.25	4.40
.85	.65	$.05	..	Do. pref.	6552	.73	.80	.70	.70
3.60	3.50	..	..	Cdn. Convert A	nil	..	B3.50	A4.00	3.50
4	4	..	..	Do. B	nil	..	B4.00	..	4
14	10	•	..	Cdn. Cottons	nil	..	B11¼	A12	11¼
8	6	..	..	Do. pref.	100	†5¾	6	6	6
9	7½	$.15	..	Cdn. Drawn Stl.	525	8	8¾	8½	8¾
10¾	10	.60+$••.12		Do. pref.	250	10½	10	10	10
22½	16½	1.00	6.1	Cdn. Dredge	2000	18	17½	16½	16½
21	18	1.20	6.7	Cdn. Fairb.	nil	..	B15½	A18½	18
125	120½	6.00	4.9	Do. pref.	nil	..	..	A120	122
3.50	2.50	•	..	Cdn. Food Prod.	500	2.55	2.50	2.50	2.50
8¼	7	..	..	Do. A	nil	..	B7	A8	7
50	35	•	..	Cdn. Fund Inv. pref.	10	35	40	40	40
765	700	8.00+4.00		Cdn. Gen. Elec.	nil	..	B555	A1000	700
31½	26	$1.17½+.15		Cdn. G. Inv.	110	26	27	†25	125
23½	16	$.75+•	..	Cdn. G. Sec. A	105	16	18	17½	18
23	20	$.75+•	..	Do. B	nil	..	B17	A19	†18½
15	8½	*•4.12½	..	Cdn. Hydro Carb.	4110	9½	9½	8¾	9
6¾	5½	$.10	..	Cdn. Ice Mach.	nil	..	B6¼	A7½	6
13	11	.80	7.0	Do. A	nil	..	B10	A12½	11½
20	15¼	$.50	..	Cdn. Ingersoll R.	2345	16	16½	15½	15½
80	75	3.75	5.0	Do. pref	nil	..	B75	A95	79
57	44	$2.25+.50		Cdn. Int. I. Tr.	nil	..	45	44¾	44¾
20	16½	$.90	..	Cdn. Int. Tr.	nil	..	..	A20	19
89	86½	5.00	5.9	Do. pref.	nil	..	B20	..	†85
19	13½	..	..	Cdn. Int. Pwr.	4000	14½	14½	14	14
49½	42½	3.00	7.0	Do. pref.	1270	43	43	42½	43
20	15	•	..	Cdn. Locomo.	302	16	16	15	16
4.10	2.45	$.06	..	Cdn. Marconi	250	2.50	2.50	2.45	2.50
39½	26¾	.80	2.0	Cdn. Oil	7006	30	30	26½	27
82	75	4.00	5.3	Do. 4% pref.	110	†75	75	75	75
102	94	5.00	5.2	Do. 5% pref.	125	97	96	96	96
180	130	8.00	..	Do. 6% pref.	nil	..	B140	A160	140
21½	11	..	..	Do. Warr. 1953	400	13	14	12	12
14.25	4.30	..	..	Cdn. Warr. 1955	4300	7.75	7.75	5.50	5.60
34¾	25¼	1.50+1.25	..	Cdn. Pacific	21857	28¼	28¼	25¼	26
26¼	18½	..	..	Cdn. Petrofina pf.	1838	20	20	18½	18¾
7¾	5	..	..	Cdn. Pr. & Pa. Sec.	nil	..	B5¾	A6½	5¾
3.75	.84½	..	..	Cdn. Propane	600	1.30	1.20	1.05	1.20
40	23½	..	..	Cdn. Salt	nil	..	B25	A27	25
2	2	..	..	Cdn. Silk A	nil	..	B2	A3	2½
10.00	8.00	•$2.10	..	Cdn. Tire	40	90¾	99¼	99¼	99¼
..	..	1.00	4.8	Do. pref.	nil	..	..	..	21
99	90	5.00	5.5	Cdn. Utilities pf.	nil	..	B90	..	91
97	78	4.25	5.7	Do. 4¼% pf.	nil	..	B75	A80	†75
32½	23	1.50	6.8	Cdn. Vickers	370	24	23	†22	†22
16	11	1.20	..	Cdn. Wallpaper A	nil	..	B12¾	A16	15
18	10½	1.20	..	Do. B	nil	..	15	15	15
17	14¾	.80	5.2	Cdn. West Gas pf.	200	18	15¾	15¼	15½
50	35	1.00	2.6	Cdn. Westinghouse	nil	..	B37¾	A40	38
5.25	4.00	$.15+.10		Capital Estates	1945	5.00	5.12½	5.00	5.12½
1.55	1.30	..	..	Carling Br. Alta.	nil	..	B1.40	A1.50	1.50
1.45	1.10	..	..	Do. V.T.	nil	..	B1.30	A1.40	1.30
12½	11½	.60+$.30		J. B. Carter A	nil	..	B11¾	..	11¾
28	25	$1.00	..	Do. B	nil	..	B28	..	25
32	19	.50+$.35	..	Catelli Food A	200	31	27	27	27
39¼	34	1.00+$.35	..	Do. B	nil	..	B39¼	A35	39¼
..	..	$4.75	..	Celanese Corp.	nil	..	..	..	..
..	..	$4.50	..	Do. 4½% A pf.	nil	..	..	..	..
..	..	$7.00	..	Do. 7% 2nd pf.	nil	..	..	..	..

Range 1957 High	Low	Div. Y'ld R'teOct. 11 $	%	Company	Sales	Last Oct. 4	Week end. Oct. 11 High	Low	Close or Latest
30¼	30¼	4.00	..	Cent Can. Invest.	nil	..	B28	..	30¾
106¼	100	5.00	5.8	Do. pref.	3	†95	†86	†86	†86
59	45	1.40	3.1	Chart. Trust	150	†50	48½	45	45
17	13½	1.00	6.5	Chateau-Gai	nil	..	B14½	A14¾	15
78	62	12.25	..	Chrysler Corp.	60	..	71½	68¼	68
.55	.50	$8d	..	Cinzano A	nil	..	..	..	.55
85	83	.5½%	..	Do. 5½% pref.	nil	..	..	..	85
2.50	2.00	..	..	Circle Bar Knit	nil	..	..	A3.00	2.50
6	4	..	..	Do. A	nil	..	B4.75	A4.75	4¾
10½	6	..	..	Claude Neon A	21	..	6½	6½	6½
10¾	5¾	..	..	Do. B	90	..	6	5¾	5¾
100	65	..	..	Do. pref.	1300	100	100	100	100
23¼	15	•	..	Cochrane, D	nil	..	..	A20	20¼
17	14	.80	5.7	Do. A	nil	..	..	A13¾	14½
8¾	7¼	..	..	Cockshutt Farm	2595	..	8½	8½	8
17¼	15	1.00	6.7	B. J. Coghlin	nil	..	..	A15	15
..	..	$.75+.25	..	Coll. Terminal	nil	..	B13	..	†17¼
14½	14½	$.75+.25	..	Do. pref.	nil	..	..	..	14½
13¼	10	.80	5.7	Comb. Enter.	785	11	11	10¾	10½
11½	9½	.80	8.5	Conduits Nat.	nil	..	B8	A10	9¾
140	100	2.00	2.0	Conf. Life	166	100	98	95	98
8	5¾	$.50	..	Cons. Bakeries	100	6¼	6¼	6¼	6¼
1.60	1.20	..	..	Cons. Div. Sec. A	11	1.30	†1.00	†1.00	†1.00
36	33	1.00	..	Do. Pref.	14	†31½	31	31	31
7	6	1.25	..	Cons. Fire Inc.	nil	..	B6	A7	6
..	..	..	..	Cons. Food	nil	..	..	..	16½
28¾	20	.80+.80	..	Cons. Min. & Sm.	17755	21½	21¾	20	20½
29½	27	$1.60+.40	..	Cons. Paper	8420	30	29¾	27	27¾
4.15	2.20	..	..	Cons. Press A	nil	..	..	A9.50	4.00
1.75	1.00	..	..	Do. B	nil	..	..	A3.50	1.75
..	3¾	•	..	Cons. Textiles	nil	..	B2.50	A3.00	†2.30
18¾	18¾	1.00	5.4	Do. pref.	nil	..	..	A17	18¾
41	26½	.80	3.0	Consumers Gas	3895	29¼	29	26½	26¼
104¾	101	5.00	4.9	Do. A pref.	195	104½	104¼	101	101¼
31	23¼	1.50	6.4	Consumers Glass	695	25	24	23¼	23½
..	..	$1.35	..	Cont. Can.	nil	..	B39¾	A40½	..
8.25	1.50	..	..	East Steel	400	1.50	1.55	1.50	1.50
13	7¼	.20+$.35	..	Easy Washing	nil	..	B7¼	A10	7¼
13¾	13	1.00	7.7	Do. 5% pref.	nil	..	B13	A14	13½
41¾	33	1.00+1.60		Economic	nil	..	B32	A33	33½
27¾	24½	$1.12½	..	Eddy Match	100	25	24½	24½	24½
50	†41	$1.12½	..	Eddy Paper	100	42½	42	42	42
58	41	1.00	2.4	Do. A	155	42¼	42¼	42	42
3.15	2.00	$.08+.08	..	Edmon. Concr.	nil	..	B3.15	A3.35	3.15
..	..	..	..	Electra Invest.	nil	..	..	..	26
11¾	9	$1.00	..	Electrolux	nil	..	B9¼	A10¼	9
79	58	$.75	..	Empire Life	nil	..	B48	A55	†55
6	5	.40	7.2	Enam. & Heat A	nil	..	B5	..	5½
1.10	1.00	..	..	Do. B	nil	..	B1.10	..	1.00
50	36	$.65+.25	..	Equitable Life	55	40	40	36	40
9½	8¾	.60	9.2	Erie Flr. & Wd. A	nil	..	B6	A9	6½
2¾	2¾	•.10	..	Do. B	200	2¾	†2½	2½	2½
19	17½	1.04	5.9	Estabrooks pref.	nil	..	B17½	A19¾	17½
.93	.54	..	..	Excelsior Ref.	2900	.61	.65	.60	.60

F

18	15	1.80	12.0	Fam. Players	1185	15¾	16	15	15
23	17¼	•1.50	..	Fanny Farm	1095	17½	18¼	17¾	18
53	48	$2.00+1.00		Fed Fire 25% pd.	nil	..	..	A49	†45
33½	25	$1.00	..	Federal Grain A	1780	25½	25½	25	25
28¾	25	1.40	5.6	Do. pref.	500	†24½	25	25	25
1.75	1.35	..	..	Feralco Ind.	nil	..	..	..	1.40
4½	3½	..	..	Fibre Products	nil	..	B3	A4	3½
..	..	..	..	Do. pref.	nil	..	..	A3½	14
11	9¼	.80	7.3	Fidelity B. & A.	nil	..	B10	A12½	11
9	8½	•.60	..	Do. B	nil	..	B8½	A9	8½
..	..	..	..	Fittings	20	†5½	5	5	5
10	8	.60	6.1	Do. A	100	8	8	8	8
..	..	..	..	Flash Fast pref.	nil	..	B15	..	†18
1.70	.50	..	..	Fleet Mfg.	7500	.55	.55	.50	.51
56½	45	•$1.80	..	Ford Motors (U.S.)	445	48¼	48½	45	45
113½	76	3.00	6.3	Ford Motor Can.) A	5851	82¼	83	78	80
117	85	5.00	5.9	Do. B	50	†85½	90	85	85
4.50	3.00	••	..	For. Pr. Secs.	600	4.00	4.00	3.00	3.00
26	17½	$.95	..	Foundation Co.	692	18	18½	17½	17½
34	22½	1.20+$.30		Fraser Cos.	3741	120	23½	23	23
..	..	.50+.60		Freiman	nil	..	..	..	†10
95	94	4.50	4.8	Do. pref.	nil	..	..	A90	94
8¾	6½	..	..	Fruehauf Tr.	35	†6½	†6¾	†6½	†6¾

G

31¼	26¼	1.40	5.2	Gatineau Pwr.	1745	28¼	28¼	26¾	26¾
106	92¼	5.00	5.1	Do. 5% pref.	45	95	98½	96½	98½
108	102	5.50	5.4	Do. 5½% pf.	95	103	103	102	102
6.00	4.85	.30	5.2	Gen. Bakeries	35	5.25	5.75	5.75	5.75
66	46½	$2.00+•		Gen. Dynamics	2976	47½	47½	45½	47
..	..	$2.00	..	Gen. Elec.	nil	..	B57	A57½	56
45

Mining Stocks

Week Ended Oct. 11

Range 1957 High	Low	Company & Dividend ($)	Sales	Last Oct. 4	Week Ending Oct. 11 High	Low	Close or latest
		A					
.16	.07	Acadia Ur. ..	8350	.07½	.08	.07	.07
.12	.07	Ad Astra	nil	...	...	...	.08
10.12½	3.10	Advocate ...	2340	4.00	3.80	3.10	3.15
.25	.25	Agassiz	nil	...	...	A.25	.25
.16	.02	Ainsworth ..	24300	.03½	.04	.02	.03½
.44	.26	Akaitcho	9200	.31	.31	.29	.29
.20	.07½	Alba	20500	.09	.10	.09	.09½
25.25	17.00	Algom	15091	19.00	19.50	17.00	17.37½
95.50	92.00	Do. 5½ debs.	120	94.00	95.50	94.00	95.50
17.00	8.00	Do. warr. ..	7160	12.50	11.12½	9.00	9.00
21.50	21.50	Do. V.T.	nil	...	...	...	21.50
.70	.22	Alscope	6000	.28	.22	.22	.22
.11	.06½	Alta.	nil	...	B.06	...	.06½
.29	.12	Amal. Lard ..	5000	.14	.13½	.13	.13
1.00	1.00	Amal. R. M. ..	9900	1.22	1.20	1.10	1.10
.17	.06	Amer'm	2000	.06	.06	.06	.06
1.98	.95	Am-Neph .04	800	.98	.95	.95	.95
.24	.09	Am. Stand. ..	2500	.09	.10	.09	.09
.50	.35	Amos Lith. ..	nil	...	...	...	.35
2.00	.70	Anacon	13875	.80	.80	.72	.72
13.00	9.75	Anglo-Hur. ..	300	9.75	10.12½	10.12½	10.12½
.94	.20	Anglo-Rou ..	7200	.60	.60	.39	.39
.76	.19	Anvil	1827	.28	.29	.19	.19
.30	.10	Anthonian ..	9700	.12	.12	.10	.10
3.20	.82	Arcadia	117200	1.08	1.10	.82	.87
.82	.35	Do. warr. ..	3400	.38	.31	.35	.35
1.67	.37	Area	8250	.85	.80	.72	.73
.19	.08½	Arjon	9,000	.10	.10½	.08½	.10
.10	.03½	Arno	1500	.03½	.05	.04	.05
.17	.08	Atlas Sulp. ..	nil	...	B.08	A.10	.10
.14	.06	Atlas Y'fe ..	5900	.08	.08	.08	.08
2.16	.29½	Atlin-Ruff ..	71550	.29	.30	.23	.24
.17	.06	Aubelle	6000	.06	.06½	.06	.06
.20	.09½	Aull	3000	.07	.07	.07	.07
.39	.12	Aumacho	9300	.18	.19	.16	.17
.21	.07	Aumaque ..	8000	.07½	.08	.07	.08
2.09	1.62	Aunor .16 ..	1000	1.99	2.00	1.98	1.99
.12½	.06	Avillabona ..	4000	.08	.08	.08	.06
		B					
1.75	.43	Baker Talc .	2700	1.45	.51	.43	.45
.14	.03½	Band Ore ..	9000	.04	.04	.04	.04
.35	.07	Bandowan ..	nil	...	B.07	A.11	.07
.42	.16	Bankeno	2600	.20	.20	.18	.18
.13½	.07	Bankfield ..	1500	.07½	.07	.07	.07
.45	.24	Barnat	3000	.28	.26	.24	.25
.22	.05½	Barvallee	1000	.05½	.05½	.05½	.05½
.84	.16	Barvue	35700	.21	.24	.16	.16
.75	.52	Barymin *.05	8000	.57	.57	.55	.55
.92	.24	Base Metals.	44480	.35	.35	.24	.26
.47	.15	Baska	12000	.17	.17½	.15	.16½
1.50	.25	Bateman	2000	.30	.30	.25	.25
.11	.04½	Beatrice	25300	.06	.05½	.04½	.05½
1.89	.30	B'tie-Duq. ..	34653	.36	.37½	.35	.37½
1.75	.51	Beaucage	4200	.60	.60	.53	.53
.40	.12½	Beaver L'ge ..	10200	.17	.16	.12½	.14
3.15	1.45	Beicher	104350	1.76	1.85	1.74	1.78
.80	.40	Bellechasse ..	13650	.79	.84	.70	.80
.23	.06	Belle-Chib. ..	4500	.08	.09	.08	.08
1.93	1.46	Belleterre .10	1200	1.50	1.50	1.50	1.50
2.75	.86	Bethle'm	32950	1.16	1.15	.86	.90
.32	.13	Bevcon	33529	.14	.14	.13	.13
.12	.05	Bibis-Yuk. ..	1000	.06	.05½	.05½	.05½
2.65	1.15	Bicroft	8919	1.30	1.31	1.25	1.25
.70	.50	Do. warr. ..	7700	.63	.65	.60	.61
.70	.10	Bidcop	2400	.12	.14	.11	.12
1.12	.60	Black Bay ..	7600	.65	.70	.60	.65
.14	.07	Bonville	9900	.07	.08	.07	.07
.17	.07	Bordulac	14000	.10	.09	.07	.08
.38	.08	Bornite	500	.08	.08	.08	.08
.18½	.07	Bouscadillac.	4200	.13	.10	.08	.08
2.55	.40	Bouzan	28550	.49	.51	.44	.45
.19	.06	Boymar	110800	.13½	.13	.09½	.11
		Bralorne					
4.50	3.75	4.20+1.10 ..	2350	5.00	4.80	4.65	4.65
.90	.18	Brilund	36800	.21	.23	.18	.18
1.07	.60	Broulan Reef	17550	.79	.80	.76	.78
.19	.06	Brunhurst ..	4500	.06	.06	.06	.06
.15	.05	Brunsman ..	10000	.06½	.06½	.06	.06
12.50	5.00	Brunswick ..	1460	5.10	5.25	5.00	5.00
.11½	.05½	Buffadison ..	5000	.06	.06	.05½	.05½
3.50	.67	Buff. Ank. *.05	2600	.91	.90	.82	.82
.21	.10	Buff. Can. ..	6400	.12	.12	.10½	.10½
.11½	.05½	Buff. R.L. ..	7000	.06	.06½	.05½	.06½
4.50	3.60	Bulolo 4.25 ..	400	3.75	3.85	3.60	3.60
4.25	.68	Bunker Hill ..	10100	.09	.09	.08	.08½
.86	.21	Burchell	19400	.29½	.29	.25	.25
1.30	.22	Burnt Hill ..	5600	.25	.25	.22	.22
.20	.15	Burrex	nil	...	...	...	.20
		C					
.51	.30	Cable	15832	.42	.40	.30	.30
11.50	.04	Calumet	8500	.04	.05	.04	.04
13.50	5.50	Camp. Chib..	8450	6.40	6.35	5.50	5.80
		Camp. R.L. ..					
6.20	5.00	5.28¼+.05 ..	50	5.55	5.60	5.60	5.60
		Canadian					
.24½	.09	Canadian Ast.	6000	.09½	.09½	.09	.09
3.70	.85	Cdn. Dyno ..	30605	1.09	1.05	.83	.91
.45	.14	Cdn. Lith. ..	12700	.22	.22	.18	.22
.36	.22	Cdn. Mal. ..	5300	.25	.25	.22	.22
.40	.20½	Cdn. N. Inca	1500	.22	.22	.21½	.22
.14	.05	Cdn. Thor ..	1500	.05½	.07	.06	.06
.82	.30	Canalask	2400	.33	.32	.30	.30
.69	.14	Canam	6000	.18	.18	.16	.17
.56	.23	Candore	3166	.30	.28	.26	.26
1.02	.22½	Can-Erin	24198	.32	.31	.22½	.25
3.60	2.35	Can-Met	57120	3.05	3.10	2.80	2.82
4.60	1.42	Do. warr. ..	10800	2.10	2.10	1.75	2.00
.35	.10	Canuba	8000	.12	.11	.10	.11
.10	.06	Canusa M. ..	nil	...	B.03	...	.10
.54	.15	Capital	5500	.16	.15½	.15	.15
.87	.13	Captain	4500	.15	.14	.13	.13
.74	.45	Cariboo	3000	.64	.60	.55	.55
.19	.07	Carnegie	1300	.08	.08	.07½	.07½
.07½	.03	Cartier M. ..	nil	...	B.04	A.05	½.02
8.50	6.25	Cassiar Asb..	5848	6.80	6.70	6.35	6.40
3.25	3.00	Castle-Tre. 5	1300	3.40	3.45	3.25	3.25
7.00	5.00	Cayzor	2900	5.90	5.90	5.30	5.30
.15	.05	Cen. Man. ..	1000	.07	.06	.06	.06
2.90	.85	Cen. Pat. ...	17425	1.00	1.02	.85	.85
.15½	.07½	Cen. Pore. ..	500	.08	.08½	.08½	.08½
.28	.06	Cheskirk	18000	.07	.07	.06	.06½
.36	.19	Chesterville ..	2000	.19	.19	.17	.19
4.25	.67	Chib. Bay. ..	159600	.94	.91	.67	.74
.80	.15	Chib. K'rand	7300	.15	.17	.15	.17
4.25	1.00	Chib. Min. ..	7300	1.12	1.12	1.00	1.05
1.52	.66	Chimo	19534	.71	.72	.66	.66
.46	.07	Chipman	14500	.07½	.08	.07	.07½
3.65	2.45	Chromium ..	3375	3.20	3.20	2.65	3.10
.40	.09	Cleveland ...	5000	.12	.11	.10½	.10½
....	....	Clix	nil	...	...	...	.12
2.00	1.75	Coast Cop. ..	300	2.50	2.00	2.00	2.00
.55	.18	Cobalt	15717	.23	.29	.22	.27
2.14	.73	Cochen'r 5.03	22160	1.86	1.87	1.61	1.64
.85	.18	Cody-Reco ..	34200	.22	.22½	.18	.18
.17	.10	Coin Lake ..	14500	.13	.14	.12½	.13
2.14	.47	Col'stream ..	145150	.55	.56	.50	.51
.58	.20	Coleman A. .	1	.40	1.20	1.20	1.20
.58	.25	Do. B	15	.25	1.20	1.20	1.20
.16	.06	Colomac	5000	.06½	.06	.06	.06
.47	.26	Cominga	3500	.30	.30	.30	.30
2.80	.76	Conagas	7400	.90	.88	.76	.77
.45	.34	Coniaurum ..	nil	...	B.33	A.40	.35
.44	.20	Conkey	1950	.21	.20	.20	.20
.21	.10	Couro	14200	.10	.11	.10	.10
.49½	.13½	Con B'keno.	10950	.15	.15	.14	.14
.23	.10	C. Beta	1333	.10	.10	.10	.10
.27	.10	C. Bi-Ore ..	7000	.12	.10	.10	.10
.55	.15	C. Callinan .	31200	.24	.25	.21	.21
.18	.06	C. C. Cad. ..	1000	.08	.06	.06	.06
25.25	12.75	Denison	31056	17.12½	17.25	15.62½	16.25
17.50	5.50	Do. warr. ..	15885	10.00	9.90	8.70	8.90
3.50	2.50	C. Disc'y 5.10	3975	2.74	2.70	2.55	2.55
2.05	1.00	C. Fenimore .	14418	1.05	1.12	1.00	1.02
.50	.15	Do. warr. ..	100	.15	.15	.15	.15
.21	.08½	C. Gillies ..	1000	.07½	.07	.07	.07
.45	.15	C. Gold. Arr.	1500	.21	.21	.20	.20
.00½	.00½	C. Goldfield.	nil	...	B.01	...	.00½
.35	.12	C. Guayana ..	5000	.13½	.13	.13	.13
1.38	.38	C. Hall'well .	96225	.44	.47	.40	.42
2.75	1.85	C. Howey ..	4525	2.00	2.00	1.85	1.90
1.09	.25	C. Marbenor.	12900	.33	.34	.27	.27
.29	.15	C. Marcus ..	2072	.25	.29	.29	.29
.18	.09	C. Monpas ..	1000	.09	.09	.09	.09
.82	.22	C. Morrison ..	15700	.28½	.31	.28	.30
.60	.38	C. Mosher ...	4275	.43	.47	.43½	.47
.38	.16½	C. Negus	9333	.23½	.23	.22	.22½
.16	.06	C. Nich.	19166	.07	.07	.06	.06
1.05	.50	C. Northland	11222	.55	.52	.50	.50
.22	.10	C. Pershcourt	nil	...	B.09½	A.10	.10
.85	.30	C. Que. G. ..	nil	...	B.52	A.75	.50
.22	.08½	C. Que. Y. ..	4000	.07	.07	.07	.07
.30	.13	C. Red Pop. .	24527	.14	.14	.13	.13
1.89	.25	C. Regcourt .	37000	.32	.34	.25	.25½
.18½	.06	C. San'rm ..	7650	.07	.06½	.06	.06
		Cons. Smelt.					
28.75	20.00	.80+.80 ...	17755	21.50	21.75	20.00	20.50
3.50	.77	C. Sud'ry ..	89600	.89	.88	.81	.82
.40	.10½	C. Tung.	4500	.12½	.12	.11½	.11½
3.25	2.00	Cont. Min. ..	77900	2.58	2.85	2.50	2.75
1.20	.65	Cont. Potash	nil	...	...	A.72	.70
7.50	3.25	Conwest	2113	3.35	3.50	3.25	3.25
1.23	.22	Copper Corp.	18700	.28	.26	.23	.23
.32	.07	Copper Man.	9514	.08	.08½	.08	.08½
8.20	1.61	Cop.-Rand ..	34301	2.10	2.10	1.90	1.92
1.09	.36	Coulee	30400	.42	.40	.38	.45
1.70	.77	Cowichan	5800	.82	.82	.77	.80
.15	.07	Crestaurum ..	nil	...	B.07	A.09	.07
.28	.10	Croinor	6000	.11½	.13½	.10	.13
.42	.12	Crowpat	21000	.12½	.13	.12	.13
....	....	Cryderman ..	nil	...	B.00¼	A.01	.00¾
.36	.08	Cusco	11587	.09	.09	.08	.08½
		D, E, F					
.19	.09½	Dablon	500	.12½	.12½	.12½	.12½
.55	.22	Daering	3000	.23	.22	.22	.22
.47	.15	D'Aragon ...	21200	.17	.18½	.15	.15½
.62	.36	Decoursey B.	8225	.43	.45	.41	.41
.20	.05	Do. warr. ..	2000	.05	.05	.05	.05
.24	.13½	Deer Horn ..	3100	.13½	.16	.13½	.13½
.17	.07	D'Eldona	9000	.12	.12	.10	.10
1.15	.68	Delnite	6700	.73	.70	.68	.68
.21	.05	Diadem	38827	.06	.06	.05	.05
.18	.09	Dickstone C..	nil	...	B.05	A.11	.09
		Dome					
14.25	12.00	.70+1.05 ..	4215	12.25	13.25	12.00	12.00
.37	.10	Donalda	9000	.14	.13	.11½	.12
.10	.02	Doreen	nil	...	B.03	...	.03
.73	.13	Duvan	18800	.15	.16	.13	.14
.26	.12	Duvex	42300	.16	.15	.12	.14
.16	.06½	East Amph. .	10000	.08	.07½	.07	.07
1.80	1.10	E. Mal. 5.05 .	35810	1.73	1.78	1.56	1.58
3.25	2.09	E. Sull.e	8240	2.25	2.22	2.10	2.10
.65	.20	E. Ash.	3000	.27	.27	.25	.27
.30	.12	E. Metals ...	8300	.14½	.15	.13	.13
4.10	1.56	E. Min	42712	1.80	1.80	1.50	1.55
.49	.26	Elder	12050	.28	.30	.26	.29
.37	.13	Eldrich	1000	.20	.18	.18	.18
.59	.09½	El Pen-Rey .	152000	.11½	.11½	.09½	.10
.82	.12	El Sol	39100	.14	.15	.12	.12
1.03	.30½	Eureka	49200	.34	.35	.30½	.31
.49½	....	Explor.-All..	18000	.25	.30	.16	.16
.29½	.13	Fab. Met. ...	1500	.13	.13	.12½	.12½
		Falconbridge					
42.75	34.00	4.50¼+.10.	12398	38.00	38.00	34.00	34.25
.30	.14	Fano	133900	.20	.23½	.19	.22
3.20	1.48	Farada	27150	2.05	1.85	1.80	1.82
1.85	.85	Do. warr. ..	4250	1.03	1.00	.90	.90
.41	.10	Farw't Tung.	4060	.10	.11	.10½	.10½
1.32	.60	Fatima	63700	.80	.80	.80	.82
.34	.07	Federal	9000	.08	.08½	.08	.08
.01¼	.00¼	Flin Flon	nil	...	B.00¾	A.01¼	.00¼
10.25	5.90	Florida	28103	9.90	9.95	9.50	9.55
.14	.04	Fontana '45 ..	1000	.03	.04	.04	.04
.35	.30	Forty-Four ..	nil	...	...	A.35	.30
.21	.06	Francoeur	12800	.07	.07½	.06	.07
.36	.21	Friday	3000	.27	.28	.23	.25
3.10	1.55	Frobisher	18904	1.61	1.67	1.55	1.59
81.00	69.00	Do. 4% deb.	nil	...	B67.00	A75.00	69.00
.23	.10	Fundy Bay ..	13300	.10	.10	.10	.10

Range 1957 High	Low	Company & Dividend ($)	Sales	Last Oct. 4	Week Ending Oct. 11 High	Low	Close or latest
		G					
.25	.04½	Gaitwin	194200	.07	.06½	.04½	.05
1.30	.40	Gelkeno	8966	.40	.44	.40	.41
27.50	17.50	Gaspe Cop. .	1664	23.00	25.00	24.00	24.00
18.37½	8.00	Geco	3243	8.00	9.00	8.60	8.60
.42	.13	Genex	8800	.16	.16	.13	.13
1.25	.25	Geo-Scient. .	91125	.60	.39	.35	.35
.27	.19	Giant Mas. ..	1406	.10½	.10½	.10	.10½
5.85	2.70	Giant Y'k. ..	3486	4.50	5.00	4.25	4.50
2.30	1.15	Glacier	38325	2.16	2.15	1.96	2.05
.70	.15	Glenn Ur. ..	25300	.18	.16	.15	.17
.28	.15	Goldale	3000	.17	.15½	.15	.15½
1.05	.07½	Gold Crest ..	16500	.07½	.03½	.03	.04½
.10½	.06	Gold Eagle ..	2000	.06	.06½	.06½	.06½
.04½	.01	Gold Lake ..	nil	...	B.01¾	A.02½	.03
.47	.22	Gold. Age ..	7500	.35	.30	.39	.30
2.10	.41	Gold. Man. ..	9300	.46	.49	.41	.42
.34	.11	Goldfields ..	2500	.14	.14	.11	.11
.25½	.08	Graham R. ..	87500	.12½	.12½	.08	.09½
11.00	3.75	Granby 4.25 ..	nil	...	B5.00	A5.75	5.75
.27½	.06	Grandines ..	15100	.09	.09	.08½	.08½
5.80	1.35	Grandue	8300	1.65	1.65	1.35	1.50
.17	.10	Grandview ..	nil	...	B.07	...	.10
.03	.03	Great Falls ..	nil	...	B.00½	A.02	.03
.67	.23	Greyhawk ..	71500	.29	.31	.28	.29
.13	.06	Gui-Por. Ur..	nil	...	B.06	A.10	.10
.49	.16½	Gulch	3000	.11	.12	.16½	.12
.14	.06	Gulf Lead ..	7500	.07	.07	.06	.06
21.75	16.12½	Gunnar G. ..	10722	17.50	17.50	16.12½	16.75
14.00	8.50	Do. warr. ..	2270	9.30	9.30	8.75	8.75
.15	.06	Gwillim L. ..	54500	.08	.06½	.06	.06
		H, I, J					
.21	.05	Haitian	41500	.05½	.06	.05	.05
2.00	1.70	Halinor	100	1.80	1.80	1.80	1.80
.09½	.07½	Hamil.	1000	.03	.02½	.02½	.02½
.18	.09	Hard Rock ..	28200	.10	.09½	.09	.09
.62	.12	Harr. Min. ..	2900	.12	.13	.12½	.12½
.27	.15	Hasaga	500	.16	.16	.16	.16
.77	.03	H'd of Lakes	3009	.05	.07	.07	.07
1.07	.31	Headway	196700	.42	.36	.41	.46
.16	.07	Heath	15800	.08	.08	.07	.07
.12½	.03	Heva	nil	...	B.05	A.07	.05
2.00	.82	High.-Bell 5.05	1900	1.30	1.30	1.23	1.25
		Hollinger					
36.00	20.50	.24+1.26 ..	9187	24.00	23.50	20.50	20.75
7.00	3.50	Hoyle	8235	4.70	4.55	3.50	3.75
		Hudson Bay					
86.50	49.00	13.75+11.15	6278	51.75	51.50	49.75	50.00
.65	.08	Hudson R. ..	3400	.11	.10	1.07	1.07
.46	.18	Hugh-Pam ..	4500	.24½	.24	.22	.24
.27	.07	Indian L. ..	14500	.09	.09	.08	.08
.90	.37	Inspiration ..	4700	.40	.42	.37	.40
.30	.15	Int. Ceramic	300	.15	.15	.15	.15
		Int. Nickel					
111.00	70.00	2.50+11.15	23947	74.25	74.12½	70.00	71.00
.41	.12	Int. Rankck	2063	.13	.14	.13	.13
2.30	.60	Irish Cop. ..	6700	.70	.80	.60	.62
5.20	2.15	Iron Bay	4350	2.29	2.35	2.20	2.20
.02	.01½	Island Lake ..	nil	...	B.00½	A.01	.02
.84	.16	Iso Uran. ..	25700	.32	.34	.30	.30
.30	.18	J. Waite 5.02	3000	.19	.19	.18	.18
1.35	.54	Jacobus	1500	1.00	1.00	.90	.95
.13	.03	Jardun	19700	.03	.03½	.03	.03
.96	.27½	Jaye	5700	.38	.40	.35	.35
.65	.14	Jeanette	31500	.15½	.17	.14	.15
.62	.13	Jellicoe	101545	.23½	.23	.18	.19
.28	.10	Joburke	15500	.12½	.13	.10	.10
.73	.32	Joliet Que. ..	38900	.26	.26	.22	.22
.25	.09	Jonsmith	8000	.10	.09	.09	.09
1.05	.45	R. J. Jowsey	4298	.51	.49	.45	.45
		K, L					
.18	.06	Kenville	32100	.06	.06½	.06	.06
17.50	13.50	K.-Addison ..	2373	16.25	16.50	15.00	15.00
2.80	.49	Kerr Lake ..	152750	2.74	2.80	2.70	2.72
2.80	1.30	Kilembe	1245	1.50	1.55	1.50	1.50
.98	.36	Do. warr. ..	1000	.40	.40	.36	.40
.39	.07	Kirk. H. Bay	16250	.08	.08	.07	.07
1.34	.48	Kirk. Min. ..	20485	.78	.76	.68	.73
.22	.13	Kirk. Town ..	7500	.16	.17	.15	.17
.23	.07	Kontiki Ld. ..	10000	.07	.07	.07	.07
.03	.01½	Koot. Base. ..	nil	...	...	...	.02
25.00	14.50	Labrador	8090	15.50	15.62½	14.50	15.00
1.60	.90	Lk. Cinch ..	1100	1.20	1.19	1.14	1.14
1.85	.50	L. Dufault ..	14300	.70	.68	.50	.63
.28	.06	Lk. Dufresne	7300	.09	.09	.06	.06
.39	.14	L. Osu	18000	.17	.16	.15	.15
8.00	3.75	L. Shore	4175	4.95	4.95	4.60	4.65
.19	.15	L. Wasa	3000	.15	.15	.15	.15
4.25	3.00	La Luz .10 ..	100	3.25	3.30	3.30	3.30
2.85	2.10	Lamaque 5.10	638	2.30	2.30	2.26	2.26
1.33	.73	Leitch Gold.	22350	1.09	1.09	1.00	1.01
.17	.07	Lencourt	1500	.08	.10	.07½	.10
.42	.05	Lexindin	296800	.06½	.09	.05	.05½
.13½	.05	Lingside	8700	.05	.05	.05	.05
.90	.34	Lithium	nil	...	...	...	.34
3.50	1.46	Little L.L. ..	15400	1.55	1.62	1.46	1.50
.13½	.04	Lomega	42500	.06	.05½	.04	.05½
1.70	.90	Lorado Ur. ..	40300	1.02	1.00	.95	.95
1.49	.60	Lorado Ur. ..	11800	.71	.71	.63	.70
.23	.08	Louvicourt ..	7000	.08	.09	.08	.08
.80	.15	Lyndhurst ..	7400	.18	.18	.16	.16
.11	.06½	Lynx Yk. ..	500	.06½	.06½	.06½	.06½
		M					
2.31	1.72	Macassa	15630	2.21	2.31	2.20	2.21
.65	.26	MacDonald ..	4000	.33	.35	.33	.35
.18	.06	Macfie	18800	.08	.07½	.06	.06
1.34	.98	MacLeod	14350	1.15	1.25	1.15	1.15
		Madsen, R.L.					
2.05	1.35	4.04+1.10 ..	17150	1.64	1.65	1.55	1.59
.11½	.05	Magnet	7500	.05	.05½	.05	.05
.11	.04	Majortrans ..	2000	.04½	.04	.04	.04
1.85	1.25	Malartic	12135	1.40	1.41	1.30	1.30
.34	.12½	Maneast Ur..	43000	.13	.18	.14	.18
.62	.19	Maralgo	37875	.32	.34	.25	.25
.15	.06	Marcon	1500	.08	.06½	.06	.06
2.10	.80	Maritimes	49750	.90	.94	.80	.82
.37	.25	Marpic	73700	....	.37	.25	.30
.21	.11	Martin McN.	7000	.13	.13	.12	.12
....	....	Massberyle ..	nil	...	...	...	.23
.60	.41	Matachewan.	nil	...	B.40	A.60	.50
.89	.20	Maybrun	10400	.25	.24	.20	.22
		McIntyre					
116.00	71.50	2.00+$1.00 .	563	79.00	77.50	73.50	73.50
.30	.17	McK. R.L. ..	750	.19	.17	.17	.17
.20	.08	McMarmac ..	19125	.12	.12	.09	.09½
.53	.24	McWatters ..	3450	.32	.32	.27½	.27½
.45	.15	Mentor Exp. .	6300	.17½	.17½	.17	.17
.55	.18	Mercedes	5929	1.15	.19½	.18	.19
2.08	.80	Merrill Is. ..	11200	.92	.91	.80	.85
.24½	.10	Meta Ur.	8500	.10½	.11	.10	.10
1.92	.55	Mid-Chib. ..	23600	.62	.60	.56	.56
1.70	.90	Midrim	127563	1.17	1.20	.90	.93
.63	.15	Midwest	3500	.17	.15	.15	.15
4.45	1.61	Milliken L. ..	31090	2.70	2.75	2.51	2.68
.17	.07	Mindamar	5200	.10½	.09	.08	.08
21.25	10.75	Mng. Corp. 5.50	3463	12.00	11.75	10.75	10.75
.45	.14	Min. End. ..	20400	.17	.17	.14	.14
.30	.08	Min. Ore	27070	.09½	.09½	.09½	.09½
.63	.12

DIVIDEND NOTICES

Blue Ribbon

CORPORATION LIMITED

Notice is hereby given that a dividend of sixty-two and one-half cents (62½c) per share on the preferred shares of the company has been declared payable on and after the 1st day of November, 1957, to shareholders of record at the close of business on the 15th day of October, 1957.

Dated at Winnipeg this 3rd day of September, 1957.

L. G. KEITH,
Secretary-Treasurer

NORTHWESTERN UTILITIES LIMITED

NOTICE IS HEREBY GIVEN that the Board of Directors of this Company has declared the Forty-Fifth Quarterly Dividend of $1.00 per share payable on November 1st, 1957, upon the outstanding 4% Cumulative Preference Shares of the Company, such dividend to be paid to the Shareholders of record at the close of business on October 16th, 1957.

DATED at Edmonton, Alberta, this 11th day of October, 1957.

C. L. METCALFE,
Secretary.

MANITOBA AND SASKATCHEWAN COAL COMPANY (LIMITED)

DIVIDEND NOTICE

Notice is hereby given that a dividend of 20c per share in Canadian Funds on the Class "A" and Class "B" shares of this Company, has been declared for the half-year ending November 30th, 1957, payable December 2nd, 1957, to Shareholders of record on November 15th, 1957.

By Order of the Board.

J. G. DeWOLFE,
Secretary-Treasurer.

WINNIPEG, Manitoba
October 18th, 1957

DOMINION GLASS COMPANY LIMITED

Notice is hereby given that an extra dividend of Sixty Cents (60c) per share has been declared out of current earnings and accumulated surplus, on the Common Stock of the Company, payable Friday, the 15th day of November, 1957, to shareholders of record at the close of business Friday, the 25th day of October, 1957.

By Order of the Board.

T. B. KING,
Secretary.

Montreal, 25th September, 1957.

JAMES B. CARTER LIMITED

DIVIDEND NOTICE

Notice is hereby given that a half yearly dividend of 30c per share has been declared on the outstanding Class A shares of the Company, payable November 1st, 1957, to the shareholders on record at the close of business October 15th, 1957.

By Order of the Board.

E. WILLIAMS,
Secretary.

Winnipeg, Manitoba,
October 11th, 1957.

A. J. FREIMAN LIMITED

Notice is hereby given that the quarterly dividend of 1¼% upon the outstanding Preference Shares of the Company and twelve and one-half cents (12½c) per share on the Common Shares has been declared.

These dividends are payable on and after the first day of November 1957, to holders of record at the close of business on the 21st day of October, 1957.

DATED at Ottawa this 11th day of October, 1957.

LAWRENCE FREIMAN,
President

INVESTORS MUTUAL OF CANADA LTD.

DIVIDEND NOTICE

Notice is hereby given that a dividend of 10 cents per share has been declared on the outstanding Capital Stock of the Company, payable on November 14th, 1957, to shareholders of record at the close of business on October 31st, 1957.

E. G. O. HOWARD,
Secretary.

Winnipeg,
October 8th, 1957

McINTYRE PORCUPINE MINES, LIMITED

Dividend No's. 174 and 175

Notice is hereby given that the following dividends have been declared payable in Canadian currency:—

No. 174 for fifty cents (50c) a share payable December 2nd, 1957 to shareholders of record November 1st, 1957.

No. 175 for one dollar ($1.00) a share payable January 2nd, 1958 to shareholders of record November 1st, 1957.

By Order of the Board.

F. T. McKINNEY,
Secretary.

Dated at Toronto, October 8th, 1957.

DIVIDEND NOTICES

CASTLE-TRETHEWEY MINES LIMITED

DIVIDEND NO. 7

Notice is hereby given that a dividend of fifteen cents (15c) per share in Canadian Currency will be paid on December 30th, 1957 to shareholders of record at the close of business on November 29th, 1957.

By Order of the Board.

F. T. McKINNEY,
Secretary.

Dated at Toronto, October 8th, 1957.

Market Bid and Ask Quotations

Montreal & Toronto

Oct. 15, 1957

	Bid	Ask		Bid	Ask
Abitibi	27½	27¾	CB Al	10¼	10½
Do p	22½	23	Do rts	3	8
Ac-Ati	8	8¼	xC B Em	56	60
Do A	17½	18	C Can A	13½	14
Do p	85	87	C Cel	14¼	14½
xAcad U	7	7¼	C C Bl	15½	20
xAcme	15½	16	Do $175	27	27½
Admi	7¼	7½	C Chem	460	495
xAdvoc	310	340	xC Chief	100	101
Ag-S	8¼	8½	C Coli	425	440
Do p	8½	9¼	Do p	65	72
xAjax	51	52	C Conv	350	400
xAkaite	22	23	Do B	400	..
xAlbo	6¼	19	xC D w	40	44
xAlta D	146	145	xC Dev	475	490
Do vt	125	140	C Drn S	8½	9
xAP Con	40	42	Do p	10	11½
Algom	17½	17¾	C Drdg	16½	17
Alg deb	94½	95	xC Dyno	82	89
Do w	920	950	xC E Gas	575	580
Algma	25½	25¾	C Fbks	12	18
Alumi	32½	33½	Do p	..	120
Do 1p	21	22	xCF Pr	250	300
Do 2p	43	43½	Do A	7	8
xA-Lar	12	14½	Do p	37½	43
xA Nar E	115	117	CGE	555	1000
xAm L	18½	20	CG S A	17	17½
xA Nep	93	97	Do B	17	18
xAmur	335	375	xC High	51	60
xAnac	70	79	xC Home	175	180
xAnaig	225	250	C Hsky	13¾	13½
xAnch	18	20	Do w	605	620
Ang-Am	9½	10¼	C Hyd C	9	9½
Ang-C Tel	..	37½	C I Ma	6¼	7½
A. Pip p	..	47½	Do A	10	12½
Ang Hi	950	1000	C Loco	16	18
xAng R	28	35	xC Mal	21	27
xAnsil	20	30	xC N In	21¼	24½
Anthes	21	22½	C Oil	26	27
xApex	5	6	Do p	140	160
xArcad	85	89	Do 4%	76	88
Do w	25	45	Do 5%	..	96
xArcan	30	32	Do w53	11½	11½
xArea	65	74	Do w55	575	600
Argus	15½	152	CPR	26	26¼
Do 240p	41½	42	C Pet p	18½	19½
Do 250p	36½	37½	xC Pros	240	249
xArjon	9	9¼	C Salt	25	27
Ash B	10½	12	xC Thor	5¼	7
xAsh T	300	390	C Tire	90	96
Do A	..	91	C Ut p	..	..
Do B	8½	8¾	C Do 4½%	75	78
A Art	7¼	7½	C Vick	20	23½
Do d	85	90	C Wai A	122	14
Do wts	800	825	Do B	13½	14
Atl A	6¼	7	C Wash	13½	16
Do p	14	13	xC Will	150	180
Atlas S	17½	18	xCndsa	25	45
xAt Yk	7	7¼	xCanam	18	20
xAt-Ruf	23	24	xCandor	25½	30
xAubel	6	7	xCanEr	25	26
xAumac	15½	17	xC Met	280	290
xAumaq	7	8	Do w	195	205
xAunor	198	210	xCan N	152	170
Aut El	12	13¾	xCan Oil	175	179
Do A	..	11	xCapt	12	14½
Aut F A	250	350	xCarib	55	64
Do B	75	325	xCass	630	655
xAvilla	5½	6	xCastle	305	335
Bly SA	940	950	xCaytar	330	575
Do 5%p	23½	25	C C I	28	..
Do 5½p	21½	22½	xC Del	685	690
xBanff	205	220	xC Expl	245	260
xBankno	17½	19	xC Pat	86	89
xBcfild	6¼	8	xC Porc	8	9
Bk Mtl	40	40½	xChaG	210	214
Bk NS	50	52	Chart Tr	43½	50
Banq Can	37	38	C-Gai	14¼	14½
xBrclna	325	..	xChesk	6	6½
xBarnat	22	23½	xChest	18	20
xBarvu	13	14½	xChib J	67	69
xBary E	53	57	xChib-K	16	17
xBase M	25½	28	xChi M	..	99
xBaska	15½	17	xChim	66	69
xBata	7	8	xChrm	295	320
Ba In	8¼	9	Chrys	69½	70½
Bath A	..	45	xC Bar	..	300
Do B	..	23½	Do A	475	475
xB-Duq	35½	37½	xCobalt	22	23
Beatty	400	450	xCoch W	165	168
xBeauc	53	60	Do D	..	20
xBeav L	10	13	Do A	..	132
B Lum	16½	16¾	Cshutt	8¼	8½
Do A	18	18	xCody-R	18	20
Burns	9½	10¼	Cogh C L	..	15¼
Burr A	6¾	7¼	xCoin L	13	14
xCbnga	47	57	Colin	44½	45
xCable	28	30	Coli	13	..
xCalalt	75	79	xColom	6	6½
Caid I p	..	23¼	Com E	10¼	12
Cal Ed	23¾	23¾	xCmoil	225	260
Cal Pow	58	59	xCom P	275	350
Do 5%p	95½	..	Conduit	8¼	9½
xCalv C	425	450	Conf L	90	100
xC Chib	540	550	xConia	72	75
xC Red L	535	550	xCniaur	33	35
xC Bd	250	295	xCKey	19	20
C B B	42	53	xConro	10	11
C Cem	22½	23¼	xC All	8	9
Do p	27½	28	C Bank	64	71
CCC St	6	7	xC Bell	13	14
C Foil	15¼	..	xC B G	10	12
Do A	17	17½	xC Call	21	23½
C Fnd A	21½	30	xC C	7	7¼
C Fnd	10	13½	xC Cord	16½	22
CI Fnd	26½	27	C Den	16¼	16¾
Do 4%p	90½	94	Dw	835	855
C Life	110	125	Dy A	7	7½
C Mach	8½	..	Do B	200	400
C Malt	46	47	xDeC	40	42
Do p	23	23½	Do w	..	3
xC O Lds	230	240	xDeer H	13½	15
Do w	145	155	xD'Eld	10½	11
C P A	35	36	xDelte	55	67
Do B	33½	34½	xDev P	140	145
C Perm	76	77	xDiadm	5½	6
C Saf 4½p	35	38	D Seag	25½	25½
xCSO w	160	190	D Exp	790	810
xCS Pet	475	490	Dome	11½	11½
CSL	30	33½	D Ang	410	..
CSL p	11½	11½	Do p	95	..
C Wre B	15½	15½	D Coal p	6	8
xC Ad O	35	40	D Brge	23	23½
xC Ast	9	10	D Cor Co	13½	14½
xC Atl O	570	590	D Dafr	7	..
C Baks	5	6	Do p	17	18
C Bnk C	39	40	D Elec	7	8
C Br	24	24½	D Fab	10	10½
Do p	24½	25½	Do 2 p	20	..

	Bid	Ask		Bid	Ask
D Fdry	26½	25	Laur A	17	18
Do p	96	97½	Do p	17	18
D Ins	166	..	L J A	19	19½
D Mag	11¾	12	Do B	21½	22
D Scot	..	21	xLeitch	106	113
Do p	40	45	xLenc	7¼	10
D St o	21	21½	Lewis Br	8	8½
D Stra	45½	46	xLexndn	6	6½
D Tar	9¼	9½	xLib P	126	130
Do p	16½	16½	xLLL	145	150
D Tex	7	7½	Lob	8½	..
Do p	118	..	Do 1 p	25½	26
xD Wi	..	75	Do 2 p	47	48
xDonal	11	12	Lob N A	17½	20½
D Rep B	12	13½	Do B	20½	21½
xD M	75	83	Lob p	40½	40½
Donoh Br	10½	11	Loews	109	..
Dow	30	30½	xLmega	4½	6
xDuvan	13	16	xL Hos	295	325
xDuvex	12	14	Do A	51	64
xE Am	7½	9	xLIP	10½	11
xE Mal	155	160	xLorado	100	105
xE Sol	215	235	Lob p	40	40½
xE Asb	25	35	xLouvi	8	10
xE Met	14	15	L St Law	15	17
xE Min	150	151	Lown	22	22½
East St	150	200	xLyndh	16	19
Easy	7¼	10	xLynx	15	16
Do p	13	14	xMacas	222	227
Econ I	32	33	xMacdon	35	40
Eddy	42	46	xMacfie	6	7
Do A	42	43	MacKin S	9½	11½
Ed Ma	24½	..	Do pfd	96	..
xElder	26½	30	xMacL	115	117
xEldr	17	20	MacM A	21	22
xElectr C	98	..	Do B	26	27
Electrolux	9½	10½	xMadsn	170	175
xEl P-R	10	11	xMages	..	95
xEl Sol	12½	13	xMagnt	4½	5½
Em Life	..	60	Mailmn p	..	92½
Eq Life	37	39½	Do cu p	25	28
Erie A	6	9	xMajfrn	4	5
Do B	250	275	xMalart	130	133
Estbks p	17½	19½	xMan U	19	20
xEurka	30	32	M Su p	..	84
xExcls	60	67	M L G	21	..
xEx All	18	19	M L M	7¼	7½
Falcon	24	24½	Do p	85	88
Fam Pla	15½	15½	xMaligo	28	30
Fan F	17½	18½	xMarcn	6	9
xFdy	182	185	xMargid	13	15
Do w	90	95	xMari	79	80
xFargo	585	595	xMrtin	12	13
xFwest	10½	12	Mass-H	52	55
Fed Fire	..	49	Do p	77	77½
Fed Gr	25	25½	xMatat	40	60
C Tire	90	96	Maxw	475	485
C Ut p	90	..	xMcbrn	20	21
xFibre	390	400	McB p	11¼	11½
Do p	..	350	McC A	..	25
Fitting	5½	..	Do B	..	25
Do A	8	10	MCoil	52	52½
Fl F p	15	..	McOil	51	53
xFleet	52	60	McIn	73	76½
xFla C	960	965	xMKen	17	19
Ford US	45	46	xMMar	9½	10
Do A	80½	82	xMWat	27	28
Do B	80	..	xMedal	295	300
Found	17	18	xMent	16	16½
xFrnc	7	7½	xMerc	9	10
Fraser	23	23	xMerril	84	89
Frei p	..	90	Mer P	10½	10½
xFrbshr	153	160	Merv p	..	45½
Do db	67	69	xMeta	8½	10
Frue	6	7	M LP	11½	12¾
xGaitw	5½	6	Do p	11½	12
Gilkno	40	42	M T	12	13
Gatin	26½	28	xMidcon	56	57
Do 5%p	96½	96½	Do w	..	105
Do 5½%	102	105	xMidr	94	95
xGeco	825	845	xMidW	225	230
G Bax	5	5½	xMWw	..	105
G Dyn	51½	52½	xMcCr	22	23
G Elec	57½	58¾	xMillik	265	270
GMC	38	38¾	xMilt B	210	225
xGen P	365	400	xMinda	8½	11
Do A	340	350	Min Cp	10¼	12
GP M A	30	33	xMin En	11	15
GSW	6	6½	xMin Or	9	9½
Do p	70	90	Mitch AC	..	35
xGenex	11	19	Mitch Ro	..	6½
xGeo Sc	36	45	Do cl B	100	..
xGt Mas	9	10	M Cont	15½	17
xGiant	445	485	Do A	14½	16½
xGlacier	195	199	xMogul	60	69
xGlenn	15	17	Mols A	23	23½
xGldale	14	17	Do B	23½	24½
xGlder	81	9	xM Kn	350	450
xGold E	5½	6	Do p	..	50
xGold M	40	44	M Mort	34	42½
xGF Ur	11	14	xMoneta	65	68
Gdy	134	159	M Loco	..	150
Do p	44	44½	Mtl 1 Tr	30	36½
G Mac A	6	6½	Moore	58	59
Do B	5½	6½	Do A	920	..
Gftn A	12½	13¾	Do B	1392	..
xG Bous	8	9	Morg &C	16½	19
Granby	..	575	Do 4½p	87	90
Gr Toy	36½	49	xMulti	72	73
xGdfields	8	8½	xNama	25	27
xGduc	155	160	Nat Dr	10½	11
GL P	33½	33¾	Do p	10½	12
GL Pow	16	20	xN Exp	26	27
Do p	21	22	N Groc	20	21½
GN G	6½	7½	Do p	25½	26½
Do 50p	..	39½	xN Hos A	395	495
Do 280p	46½	48	Do B	350	400
Do w	325	395	N Lead	100¾	100¾
Gr Pins	19½	20	xN Pet	236	260
GW C A	6	6½	N St C	22	22½
Do B	5	5½	Nat Tr	36½	39
Gr W	19½	..	xNealon	16½	17
xGrning	435	475	xNealn	15½	18
xGryhk	27	28	Neon	11	13
xGridoil	470	510	xNes L	33	38
Guar T	20½	20½	xN Alg	6	7
xGulch	10	12	xN Ath	19	24
xGulf L	7	8	xN Bid	5½	6
Gunn	16½	16½	xN Bris	30	32
xGnar w	850	870	xN B D	195	210
xGurney	225	350	xN Cal	21	23
Do p	8	9	xN Chb	163	165
xGwilm	6	6½	xN Cone	27	30
Gyp	28	29½	xN Cont	38	40
Hahn	14½	21	xN Dav	18	21
Do A	13½	14	xN Del	54	55
Hallnr	160	220	xN Dick	170	175
H Cot	12½	15½	xN Dyck	475	485
Do p	78	80	xN G Ex	150	160
H Carp	6½	6¾	xN Gvue	7	8
xHd Rck	7	9	xN Harri	12½	14
xHar-M	13	15	xN High	12½	15
Hartz A	7½	7¾	xN Hgh	16	18
xHasaga	16	19	xN Jas	7	7¼
xH of L	5½	8	xN Kel	7	8
xHdway	49	50	xNlund	18	19
xHeath	8	8¼	xN Man	43	44
xHees	350	350	xN Mta	12	12½
Hendsh	5½	6	xN Myla	10½	11
Do p	..	86	xNnor	5½	6
xHevn	16	19	xN Rou	6½	10
xHigh-B	120	130	xN Sen	6	6½
xHighw	20	21	xN Sup	130	135
H D	41½	43	xN Taku	12½	15½
Hi-T	8½	8¾	xN Rim	160	165
xHold A	150	200	xNipis	141	149
Do B	150	200	xNisto	6	7
Holling	26½	27	xNor-Ac	14	14½
Holt Ren	51	..	Noran	6	6½
Do 1st p	92½	99	xNogld	9	11
Do 2ndp	80	..	xNorlar	8	9
He O A	16½	16¾	xNrmet	294	300
Do B	16½	16¾	xNorpax	48	49
H Smit	25	26	xNorsyn	14	15
Do p	..	39½	xNorvi	26	30
xHoyle	390	395	xNCO	315	330
Hud B	50	74	Do w	155	169
Do O&G	14½	14¾	Do p	31	31
Do OGr	23½	24½	xN Rk	76	77
xH-Pam	23	25	xNthsp	440	450
Hu O A	12½	13	Do A w	270	290
Do B	12½	..	N Star	11	11½
Do p	25½	..	Do A	12	13½
xHum O	85	90	Do p	37	37¾
Hur Er	32½	32½	Do w	455	500
Imp B	45	46	Do w56	230	300
I Flo	26	27	xN Can	150	160
I In A	10½	11	NQ P	22	22
Imp L	51	55	Do 1 p	4½	..
Imp O	39½	39½	xNor Ph	320	330
I Tob	11½	11¾	NW U p	75	77½
Do p	54	54	xNthid	31	41
xInd L	7	8	xNorval	15	16
I Acc	24½	25½	xNudul	18	20
Do 430p	85½	89	Oak W	8	10
Do 225p	43	45	xOkalt	138	160
Do 275p	48½	..	xOLear	16	18
Do wts	730	775	xOB S	50	50
Inger A	6¼	8	Do p	7	7
xInglis	300	315	xOJC	135	160
Ing B p	10	10¼	Do p	8	8½
Inl C p	13½	14	Do B p	7	7½
In G	7½	7¾	Do w	50	55
Do w	375	375	O Loan	23½	24½
Do p	14½	14¾	O Stl	21	22
xInspir	40	43	xOpem	760	770
Int Bro	10½	12	xOr Cr	200	225
Do p	19½	20½	xOrena	13½	14½
I Mill p	65	..	xOrms	22	24
I Nickel	71	71¾	xOsisk	26	30
I Pete	41¼	41½	PCE	15	16½
xInt Ran	12	13	Pac P	21½	22
I Util	23½	24	Pge Her	110	112½
Intprov	10½	12	xPmour	39½	43
IPL B w	45	200	xPan W	31	33
IPL	40	40½	xParam	6½	7
Inv Syn	11½	13	xParbec	4½	5½
Do A	10¼	10¾	xPardee	42	47
Inv Sec	59	69	xParker	..	475
xIrish	59	69	xPater	40	44
xIrn B	200	210	xPatno M	600	700
xIstpe	120	130	xPatrick	18	19
xJ Wal	17	18	xPeerless	35	..
xJacob	90	96	Pbina n	7½	8
Jam Pub	20	22½	Do p	..	40
Jam PS	..	100	xPeter	40	44
xJaye	33	37	Petno M	600	700
xJean	14½	16	xPymst	18	19
xJellico	18½	19	Peerless	35	..
xJburk	10	11	Phina n	7½	8
Jons-M	40	..	Do p	..	40
xJoliet	23	24	Pmms	23½	25½
xJonsm	6½	9	Do p	100	108
xJows	40½	49	PCJI	16½	21
xJump P	31	32	Do p	92	92
xJupit	230	240	xPmo p	225	230
Kelvin	6	6	xPerron	27½	28
xKenvil	6	6½	xPeruv	90	93
Ker Ad	15¾	15¾	xPetrol	54	57
xKerr L	271	272	xPhil	115	120
xKil	150	160	Ph Eng	38½	..
Do w	41	48	xPck Cr	106	112
xKirk H	7	8½	xPion	127	130
xKirk M	71	72	xPit-Or	6	7
xKirk T	15	17	Placer	840	..
Labatt	16	19	xPonder	30	55
Labdor,	14½	15	Pow R	25½	33½
Lkind	325	340	xP Rou	42	47
Do w	80	85	Pow Cp	52½	53
Lfge A	7½	8½	xPrairie	310	340
xL Cin	109	110	xPr Brd	5	6½
xL Daf	62	70	Prem T	91	..
xL Ling	9	10	Pr Iron O	54	57
xL Osu	13	20	xPres El	75	95
xL Shor	460	480	xPrest	640	655
xL Was	15	16	Price Bro	43	44
L Wds p	122	140	xPrnto	500	520
xLaL	315	340	Do w	130	140
xLamq	221	250	xPros A	82	100
L Sec	18½	19	xProv G	263	265

	Bid	Ask		Bid	Ask
Prov Tr	11½	12½	Do c	275	425
xPrdex	6	7½	Do p	93	96
xQ Ascot	15	16	xSurf I	4	4½
xQ Chib	53	54	Switsn	310	345
xQ Cop	35	38	Sylvan	135	138
xQ Lab	8	9½	Tmbln	19	202
xQ Lith	620	635	Do p	37	..
xQ Man	20	22	xTandm	13½	14
xQ Met	120	123	xTaurc	47	50
Que Pwr	..	29	Tay PC	8½	9
xQuinat	20	21	Do p	7½	9
Quem	915	950	xTeck-H	162	164
Quin A	9½	10½	xTemag	180	190
Quin	300	..	xTex C	45	47
xQuon P	20	22	Tex Co	61½	611
xRdior	64	65	xTho L	53	56
xRaiser	41	42	xThom P	350	400
Rap-Gri	7	7½	xTiara	7½	8½
xRayro	127	128	TT Tirs	8	16½
xReef	9½	10	xTmbill	54	58
xReeve	100	110	xTorbrit	30	32
xRenab	125	145	T-D Bk	37½	38
xRexsp	39	40	T Elev	18	20
Reyn p	..	80	T Gen T	31½	31½
xRichwil	165	168	T Iron	26	26
xRio R	7½	8½	Do A	23	26
R Sk A	..	14	Tor Mor	100	..
Do B	5½	5¾	T Sav	27	..
xRix	55	58	xTowag	9	11
Robertsn	12½	15	T Fin A	33¾	34
Do $1 p	14	18	Do B	20¼	35
xRobin	..	300	Do 4½%	..	83
xDo p	100	200	Do 5%	35	36
R Little	9	9½	Do A r	..	18
Do A	12	13	Do B r	18½	..
xRoche	12	12½	Do w	18½	..
xRckwn	37	39	xTr Can	124	130
xRky p	40	42	xTr-Em	201	205
Roe AV	12	12½	xDo rt	16½	21
Rolland P	..	17½	Tr-Mt	62½	65
Do pfd	75	80	Tr PPL	20½	22
xRowan	8	8½	Tr Res	17	20
xRoxan	14½	15	xTriad	460	470
Roy Bk	59½	60	xTribag	21	35
Roy O A	11	11	xTrin	21	34
Royalit	14½	14¾	xUit-Sh	35	38
Do p	25	27	Un A	66	67
Russell	8	9½	Do A 2 p	7½	7¾
xRyanr	10	10½	U Gas	62	63
StL C	132	14	xU Min	17	18
StL Cp	13¼	13½	xU Asb	490	495
StL A p	91	92½	U Cp A	25	26½
xSt Maur	64	64	Do B	18½	19
xSt Mic	15	19	xUn Est	8	11½
xSan A	52	55	U Fl A	53	54
xSand R	25	26	Do B	45	49½
xSapph	70	72	xU Keno	385	400
Do deb	30	40	xU Mont	7½	8½
Sar	14½	14¾	xU Oils	285	289
Scfe A	6	8	Un St	12½	13
xScrry	207	212	U Prd	21½	22¼
Scythe	13½	17	xUpp C	65	70
Do p	19½	..	xVanad	490	500
xSec P	580	590	Vando	..	6½
Shawin n	22	22½	Vent	27½	28
Do A n	26½	26½	Vlau Ltd	..	70
Do A p	40½	41	Victoy A	5	5
Do B p	42½	46	xDo B	200	255
xShp Cr	38½	50	xVico	6	7½
xShrt	495	500	V G Tr	23	24
Shrf-H A	12½	13	xViolm	124	125
Do A p	25½	26	V Dar p	12½	15
Do B p	24	24½	xVul	45	55
Sher-Wms	36	..	xWainwr	310	330
Do pfd	..	125	Waite	650	670
Sicks	20½	22	W G W	7½	72
Do vt	20½	20½	W Eq	9	9½
xSigma	400	450	Wayne	9½	10½
Siknt	17½	18½	xWebb K	212	220
Do p	36	..	xWeedon	22	25
xSil Mil	42	..	xWernr	9½	10
xSil St	16	18	W Mas p	..	23
Silwd	A10	10¼	xWspac	16	18
Do B	10	11	W Koot	116	..
Sim & So	20½	..	W Mal	6	7
Do 5%p	..	93	xW May	175	195
Simpsn	15	15¼	West	16	16½
xSiscoe	61	70	W C Br	27	30
xSKD	250	250	xW Dec	186	190
Slt n	15½	16	xDo w	45	52
Do p	92	..	W G A	..	33½
xSlocan	6

HOW MANY OF YOUR CANADIAN STOCKS ARE DOWN IN PRICE?

If you're like many traders — you're still wondering what hit. About all you know for sure is that long term gains were wiped out, short term profits escaped you, stocks that couldn't fail have failed.

HOW DO YOU RECOVER YOUR LOSSES?
You probably won't, unless you admit the market moves in cycles. Lows follow the highs and unless you make it a point to buy low and sell on the rallies — losses will probably continue.

DID YOU BUY LOW — AND THEY WENT LOWER?
Maybe you didn't buy "selected" stocks — issues that were not only bottomed out, but ones which also had the capacity to regain their composure and begin new market runs.

HOW DO YOU FIND SELECTED STOCKS?
By maintaining a continuous study of market action, latest physical developments, distribution patterns, and by interpreting these factors on the basis of experience. There is no substitute for study, hard work, and insight born only of experience.

HOW DO YOU AVOID THE LOSERS?
It is folly to believe that anyone can pick only winners. But by following a pattern of sound and sensible trading habits — you can with a minimum of investment establish a portfolio that will take occasional and temporary losses in stride — provide you with over-all continuous profits.

THIS TRADING ATTITUDE MEANS DOLLAR PROFITS
It enabled our clients to buy AREA near 54c and sell at $1.50-80 before the reaction to below a dollar less than a week after they sold, enabled them to accumulate IRON BAY near $1.85 when other traders were running away from it, and to take profits all the way on Iron Bay's subsequent climb to over $5.00. This same type of thinking told clients to buy TRANS MOUNTAIN PIPE near $74 and resulted in their taking profits of up to $71 per share as the price rose to $145.

YOU NEED a lot of things if you're to recover your losses — if future trading is to make you money instead of taking it away. The Canadian Forecaster can help you and will start off by providing an analysis of your present problem stocks — offering you a frank opinion as to what future trading prospects are. There is no charge for this service to our subscribers — and its extent is limited only by the time that can be reasonably allotted to it. We will follow this up with our 8-page weekly bulletin that gives you enough up-to-date and significant information to keep you thoroughly posted on economic, political, investment and speculative trends — plus intelligent discussion on individual mining, oil, and industrial stocks, and on how they will be affected by these trends.

THE CANADIAN FORECASTER rounds out its service by telling clients exactly what stocks to buy, when to sell — and why. For a $5 trial subscription we'll show you over a 60-day period why traders all over the world consider our weekly bulletin an invaluable asset to their activity in the Canadian stock market. The annual fee for our service is $35. Address The Canadian Forecaster, 231 Examiner Building, Calgary, Alberta, Canada.

Plumbers Elect New President

MONTREAL (Staff)—Donald S. Munro of Montreal has been elected president of the Canadian Institute of Plumbing and Heating at its annual meeting at the Seigniory Club, Que. He is vice-president of the Montreal wholesale firm of **Jamieson-Dansereau Ltd.**

Others elected to the executive were:

Vice-Presidents: C. N. Chapman, London; C. W. Johnson, Toronto; F. H. Meyer, Montreal; J. C. Ryan, Regina.

Directors: J. A. Burgess, Wallaceburg; J. P. Campbell, Saint John; J. S. Corrigan, Toronto; Roger DeSerres, Montreal; W. A. Graham, Edmonton; D. J. Gunn, Toronto; P. J. Ivey, London; C. F. Kydd, Vancouver; F. D. MacNaughton, Montreal; R. M. Nicolson, Sarnia; G. W. Parker, Sarnia; E. C. Phillips, Toronto; Davis Russell, St. Catharines; D. G. Willmot, St. Catharines.

Taking Stock

What's going on in the mining and oil markets — the facts and rumors.

By RAY MAGLADRY

Slower activity in the U. S. steel industry is reflected in recent steady weakening of iron ore stocks.

The expected second-half improvement in ore consumption has failed to materialize and there's a feeling the present downturn may affect next year's orders. Long-term outlook for Canadian ore, however, remains good with predictions of a 200%-300% rise in shipments in the next 10 years to meet expected demand.

Here's how senior iron ore issues have been moving:

	Latest Price $	6 Mons. Ago $	1957 High $	1957 Low $
Hollinger	21	29⅛	36	20½
Labrador	14¼	20⅛	24¾	14¼
Steep Rock	12⅛	22	23⅛	11⅜

THE BUZZ IN BOARD ROOMS—is about steady price decline in the uranium group even though these companies operate or will operate under fixed premium price contracts. Although the **John M. Easson & Co.** uranium share index is at its 1957 low, the index could drop another 24% before touching last year's bottom.

Senior base metal stocks are hit by stepped-up selling pressure in recent sessions, although a mild rally at mid-week cuts some losses. **International Nickel** slips from $74¼ to $70, lowest price since 1955, settles at $71½. **Hudson Bay** eases from $51¾ to $50¾ and **Falconbridge** sells down to a new 1957 low at $24 from $25, settling at $24⅛.

Exception among producing mines, **Sherritt-Gordon** holds relatively steady around $5 compared with $5.25 a month ago.

* * *

The Jack Allen group of companies continues to spearhead activity in the eastern Hudson Bay area. **Malartic Gold Fields** takes on an iron prospect on the eastern shore of the bay near Great Whale River with **Belcher Mining** and **Wright-Hargreaves** participating.

Malartic stock at $1.30 compares with $1.40 recently, Belcher at $1.75 compares with $1.76 and Wright-Hargreaves is lower at $1.36 compared with $1.62 a week ago.

J. L. Goad & Co., Toronto brokerage house, has issued a booklet "How to Appraise Iron Ore," covering production, marketing and other phases of the industry including a map spotting all Canadian producers.

* * *

Mild interest in **Chromium Mining & Smelting** as company reports earnings of $1.23 in latest fiscal year, up from 89c a share the previous year. Chromium stock bounces up from $2.75 to $3.20, settles at $3.10.

Substantial recent improvement in grade of ore at **Madsen Red Lake Gold Mines**, according to a review by **Doherty, Roadhouse & Co.** which says that shares of profitable gold producers have merit because of "their depression resistant qualities." Madsen at $1.70 compares with a recent price of $1.64.

* * *

ON THE OIL AND GAS FRONT—Selling pressures bring these stocks down steeply to pace declining markets. One popular oil index was near the year's low this week, down about 17% in a month.

Bailey Selburn Oil & Gas plans exploration and development program in the Wainwright area of Alberta. One exploratory test location has been selected, as well as one field well. Bailey Selburn A is lower at $9.45 compared with $11.25 a week ago.

Western Decalta will be operator of producing properties in Turner Valley recently acquired by a team headed by Decalta from **Canadian Oil Companies.** Interests amount to a net 23 producing oil wells. Decalta stock at $1.87 compares with $2.03 recently.

MINING INVESTMENTS

Base Metal Prices Weaken Copper, Lead Demand Eases

Base metal price structures are softening again as demand continues on the mild side.

The recent price changes:

- Union Miniere du Haut Katanga, big Belgian Congo copper producer, has dropped its quotation from 25.45c a lb. to 23.6c a lb. in two quick price changes over the week.
- A U. S. custom smelter has reduced the price of lead by a half-cent to 13.5c a lb. as sales dropped off.

On the London Metal Exchange, copper prices weakened slightly to 23.46c a lb., little more than half a cent below the quotation a week ago. U. S. primary producers maintained their 27c a lb. price at mid-week.

The lead price change was the first since last spring when price came down from 15c to 14c a lb. in the U. S. Canadian price has been cut from 13.5c to 12¾c lb.

In other metals, nickel supply in Europe has been increasing in recent weeks and buyers are ordering only to meet current requirements, according to trade observers.

Free nickel price, difficult to determine exactly, is placed at around $1 a lb. in the U. K. Reports of diversion of nickel in the U. S. to private, non-defense industry and release of stockpiled nickel by the U. K. to consumers are affecting price levels and outlook.

* * *

O'Brien, VMC Plan Drill in Virginia

A drilling program financed by **O'Brien Gold Mines** and **Virginia Mining Corp.** is to be carried out to test two sulphide occurrences in Buckingham County, Virginia.

Preliminary exploration work in this area has been carried out by **Exploration Projects**, a syndicate of several Canadian mining companies.

O'Brien and Virginia Mining will spend $30,000 to drill two showings to greater depth. Some 12,000 ft. of shallow drilling has already been done, disclosing copper and zinc values in association with iron sulphides, according to Larry O'Brien, president of O'Brien Gold Mines.

They will carry out the program through a new company, **Willis River Mines**, which will take over the property from Exploration Projects and other vendors. If all options are taken up, O'Brien would have a 48% interest and Virginia Mining a 45% interest in the new company.

O'Brien is also participating with **New Highridge Mining Co.** in **Atlantic Coast Copper Corp.** which will sink a shaft to 1,000 ft. on the Little Bay copper property in Newfoundland. O'Brien, which is managing the property and financing development with New Highridge on a 50-50 basis, says previous drilling indicates a minimum of 2 million tons of ore averaging 2.1% copper.

The ore body at 1,000 ft. depth will be examined where drilling disclosed a maximum width of 25 ft. grading slightly over 4% copper.

* * *

850,000 Oz. Silver Shipped Via TTL

Silver ore shipments in the third quarter through the Temiskaming Testing Laboratories for seven producers show a total of 129,648 oz. of silver bullion of gross weight of 1,084,794 lb., Ontario department of mines reports.

There were 856,955 oz. of silver shipped along with 81,991 lb. of cobalt, 20,977 lb. of nickel and 10,689 lb. of copper.

There were no cobalt ore shipments via the TTL in the third quarter.

BUILDING CENTRE STAFF

Five new appointments have been made to the staff of The Building Centre, Toronto. Robert G. Calvert, a registered architect, is now technical director, and Jack De Maria is chief display designer. Bruce L. Woods is director of public relations with John H. Miller as his assistant and Miss Belle Greenberg as creative and promotions director.

Canada Savings Bonds

Draper Dobie & Company Ltd.

MEMBERS THE TORONTO STOCK EXCHANGE

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SUDBURY WINDSOR NORTH BAY ST. CATHARINES PORT COLBORNE LONDON

Ultra Shawkey Plans to Drill Baffin Island Iron Prospect

Ultra Shawkey Mines plans a diamond drilling program on its iron ore property next year on Baffin Island, President Gerard Kelly says in a report to shareholders.

Development will continue on mineralized zones on the property and other descoveries made this year will be examined, he says.

The 1957 program was curtailed due to delay in delivering drilling equipment to the site. This equipment is now stored at the base camp.

Two zones, No. 2 and No. 3, have the best potential in the west group, Consulting Engineer Larry F. Labow reports. The No. 3 zone has been shown by mapping to have length of 12,000 ft. and width of 2,100 ft. across the full structure.

The depositional area is in the shape of a shallow saucer-like basin and no difficulty would be encountered should open pit mining be undertaken, he says.

The No. 2 zone, lying on the same strike about one mile to the west, also presents a simple mining picture.

Controlled samples have been taken across the various iron bearing formations and about one and one-half tons of samples have been shipped to Toronto for metallurgical testing this fall.

MEMO From Elder

GOLD As the Next Profit-Maker

The Dow Jones Industrials have dropped 50 points since the Elder Letter anticipated a downturn and advised a swing to golds.

Meanwhile our gold recommendations have rolled up profits of as much as 25%.

Two weeks ago, the day the New York market rallied to 465, we called another immediate drop—and as we write 30 points have been lost from this level.

NOW THE DIE IS CAST

Our predictions of two months ago that *deflation* was to be feared more than inflation—at least for the present—have worked out to the letter.

The present world money-shortage will allow no other course. But the few who do control the free world's cash know one thing well: that major gains will be achieved in gold.

After saying, "Get out of the market" on every rally since mid-summer—and after urging clients for two weeks to tidy up their accounts and go after cash—we begin this week a series of thorough investigations into the gold market—anticipating that profits we have already made in this group have been only the beginning.

Contact us immediately if you want today's first issue in this series. Send your check for $3 to cover a six-week trial subscription or $35 for a year of weekly service.

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COMPANY

NAME

ADDRESS

CITY AND PROVINCE

NATURE OF BUSINESS FP-65

Company Report

To assist readers in appraising and comparing company financial statements, The Financial Post has a uniform method of presenting corporation accounts. Variations from the companies' published reports are footnoted.

Oil

CANADIAN PROSPECT had net loss of $216,734 in year ended April 30 compared with net profit of $36,106 the previous year.

Production rose from 198,043 bbl. of oil in the 1956 fiscal year to 323,321 bbl. last year. Output in the May-July period this year amounted to 69,704 bbl., President Wilbur L. Griffith says.

The company estimates its net proved reserves, as of June 30 this year, at 1.1 million bbl. of oil. Of this reserve, 1,093,942 bbl. were proven and developed and 104,600 bbl. were proven and undeveloped.

It will cost the company about $110,000 to drill the proven and undeveloped oil reserves, Mr. Griffith says.

The company's undeveloped acreage interests included, as at June 30, about 864,481 net lease acres in southern Saskatchewan and Manitoba, 212,507 acres in North and South Dakota and royalty interests in 4.7 million gross acres, equal to 45,000 net acres, throughout western Canada.

Bluewater Oil and Gas, financed jointly with **Canadian Export Gas**, has drilled 11 wells on acreage in Lake Erie. Two aditional wells were recently drilling.

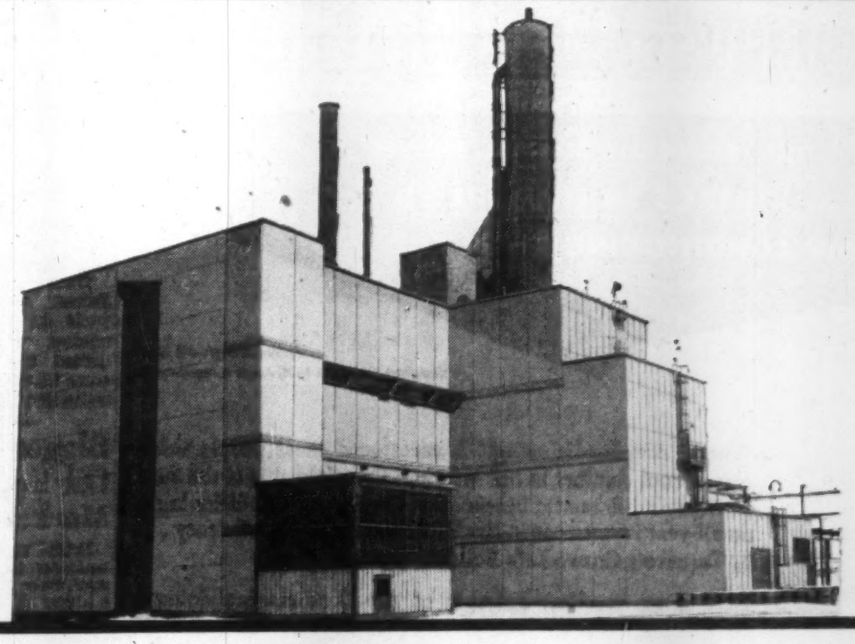
Canadian Prospect, which owns 595,950 shares or 25% of outstanding capital of Canadian Export Gas, proposes to acquire all or nearly all the remaining outstanding Canadian Export shares. Exchange offer in on basis of 2½ shares of Prospect for each ninee shares of Canadian Export.

INCOME ACCOUNT

Years Ended Apr. 30:	1957	1956
Crude oil sales	$581,347	$413,687
Add: Gain on sale sec.	696	187,068
Other income	44,148	26,712
Less: Gen. & adm. exp.	160,441	144,162
Prod. exp.	106,936	68,627
Lease rentals	96,027	102,958
Depreciation	96,846	87,922
Depletion	196,950	82,404
Amortization	4,693	5,120
Dry holes & aband.	39,203	25,596
Interest	114,867	49,317
Amort. bd. disc., etc.	7,890	22,286
Amort. invest. & w/o	16,972	2,969
Net profit	‡216,734	36,106

CONDENSED BALANCE SHEET

As at Apr. 30:	1957	1956
Cash	$113,066	$163,941
Mkt. sec.*	156,023	100,950
Other invests		401,701
Accts. etc., rec.	92,753	121,899
Drilling dep.	13,609	14,059
Inventory	25,841	72,589
Total curr. assets	401,292	875,139
Prepaid exps.§	4,436	6,963
Notes rec.	215,575	190,527
Invests.	2,020,559	1,894,916
Fixed assets†	1,053,324	997,740
Other assets	114,706	120,706
Total assets	3,809,892	4,085,981
Accts. etc., pay.	70,397	229,762
S. f. pay.	50,000	50,000
Total curr. liabs.	120,397	279,762
Funded debt	2,041,500	2,200,000
Capital stock	462,253	453,677
Capital surplus	1,965,831	1,735,906
Deficit	800,089	583,354
§Incl. in curr. assets in co's report.		
*Mkt. value	155,117	100,000
†After depr., depl., & amort.	$74,810	275,414
Working capital	280,895	595,377



CANADIAN SIROCCO
gives world's most modern Ethyl plant
once-a-minute air change winter and summer...

The Ethyl Corporation of Canada Limited, manufacturers of the world famous Ethyl anti-knock gasoline compound, have provided the healthiest, most comfortable working conditions possible in their new Corunna plant, near Sarnia, Ontario.

A specially designed air distribution system calls for a complete air change once each minute in some parts of the plant. Altogether some 20 Canadian Sirocco fans of various types handle up to 650,600 cubic feet of air per minute. The main air supply is a Canadian Sirocco H. S. fan with a capacity of 159,400 C.F.M. Air is exhausted from all levels, through a central plenum into a stack by a single Canadian Sirocco H. S. fan with a capacity of 217,400 C.F.M.

Canadian Sirocco Steam Heating Coils at air intakes maintain comfortable temperatures throughout the plant during Winter Months.

If you have a ventilation, heating or air conditioning problem — large or small — let one of our engineers help you to select and apply the proper equipment.

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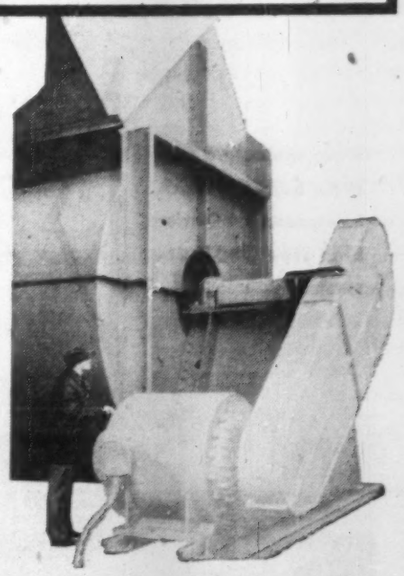

Giant 119S Canadian Sirocco H. S. fan exhausts air from plant at 217,400 C.F.M.

AMERICAN-Standard PRODUCTS (CANADA) LIMITED

CANADIAN SIROCCO PRODUCTS

In the United States: American Blower Corporation, Detroit 32, Michigan

ANNOUNCEMENT

Fruehauf Appointment

W. H. HALL

The appointment of W. H. Hall as Director of Purchasing and Planning for the Fruehauf Trailer Company of Canada Limited, has been announced by K. N. Milne, Plant Manager. Associated with American Motors (Canada) Limited since 1951 as senior buyer and then purchasing agent, Mr. Hall will be responsible for Fruehauf's purchasing, planning, traffic and material handling.

CDN. GENERAL LOWER

Canadian General Investments Ltd., Toronto, unaudited liquidation value per share at the end of the third quarter (Sept. 30) was $36.78 ($41.37 a year earlier).

Staking Drive Picks Up Speed In Two Northern Ontario Areas

What may be the beginnings of a staking rush has been building up quietly in northwestern Ontario.

First intimations of blanket staking of large tracts of promising ground comes out of the Fort William-Port Arthur area.

So far the efforts of the major mining organizations believed tieing up the ground are veiled in secrecy.

But it appears that:

—At least two major areas north of **Lake Nipigon** are the centres of attraction to mine developers. These are believed being checked for copper and nickel mineralization.

—One area lies immediately north and east of Armstrong, Ont., on the Canadian National Railway main line.

—The second area is believed about 80 miles north of Armstrong on the Albany River.

In addition, considerable work is being done in the Shebuskwia Lake area where **Leitch Gold Mines** came up with a copper find more than a year ago. This area is about 20 miles south of the Albany River district.

One of the mining groups involved is the M. J. Boylen organization which pioneered in New Brunswick and which recently brought into production the **Maritimes Mining** property in Newfoundland.

Sulmac Exploration Services, an exploration and mine development firm, is believed acting for other interests in covering a large area involving more than 700 claims between Armstrong and Nakina, Ont.

Other companies believed working in the area north of Lake Nipigon include **Consolidated Mining and Smelting, Noranda** and **McIntyre.**

Old-time prospectors are also reported going back into northwestern Ontario in the area between the Red Lake gold camp and Longlac. This is considered a highly promising prospecting ground which was combed in the late 1920s for gold.

The renewed interest appears to be to check out old gold showings and also to re-check for other mineral indications.

Sharp Increase

Indicating the extent of the mineral search in this northwestern Ontario area are latest reports of claims staked in the province.

The provincial Department of Mines reports that 5,160 claims were recorded in the same period last year.

The only other area in the province to show an increase in this period is Porcupine, another well-established gold camp where prospectors have been re-examining and restaking old ground.

The Patricia and Kowkash mining divisions cover the area north of Lake Nipigon. In September, there were 1,152 claims recorded for these divisions, well up from 218 claims in September 1956.

Devon-Palmer Cash Flow Rises 51%

Devon-Palmer Oils had cash flow of $350,043 from production operations in the first five months of the fiscal year to June 30, a 51% increase over cash flow of $230,650 in the same period last year.

Cash flow from drilling operations amounted to $318,044 as against $136,228 in the five-month period of 1956.

Gross production income was $556,987 as against $410,000 while gross income from drilling amounted to $1,082,828 compared with previous figure of $854,220.

Working capital of the company at June 30 this year was $2.3 million compared with $451,372 at that date in 1956.

Company engineers anticipate that development drilling on productive locations now held by the company should increase daily production from a potential of 2,700 to 4,000 bbl. daily by the end of 1957, President M. N. Palmer says.

Production in the first five months of the fiscal year amounted to 237,456 bbl. compared with 182,089 bbl. in the previous period.

There were 58.6 net oil wells on production at June 30 and three net gas wells, compared with 49.3 net oil wells and one net gas well a year earlier.

Oil reserves at June 30 this year were estimated at 10.5 million bbl., increased from 6.8 million bbl. a year before. Gas reserves were 122.3 billion cu. ft. compared with 35 billion cu. ft. year before.

Land holdings were 3.1 million gross acres or 436,725 net acres of petroleum and natural gas leases.

During the past year, Devon-Palmer found 3.9 discovery wells for a total of 14.2 net wildcat wells drilling. Also drilled on company holdings were 14.6 net development oil wells and two net gas wells.

Bigger Share Oil Equipment Market For U.K.?

British manufacturers of equipment for the petroleum industry may make a determined bid for a bigger slice of this $750 million a year business.

Market potential has been highlighted in a report of the Economic, Technical and Goodwill Mission sponsored earlier this year by the Council of British Manufacturers of Petroleum Equipment.

The mission toured Canada coast-to-coast in May and June.

Some of their conclusions:

—British share of the market has been very small, due to relatively long delivery periods, lack of service outside the major outlets.

—Price and quality of British products were believed to be competitive.

—Even the largest, world-wide U. K. firms are relatively unknown in Canada, suggesting a need for aggressive selling.

—Ultimate objective should be maximum manufacture in Canada achieved through intermediate stages of direct representation, local assembly and part manufacture.

Ontario To Study Mine Protection Rules, Regulations

Ontario plans to take another look at the whole question of guarding unused mine workings.

The question arose following death of a young boy who fell down a disused mine shaft in northern Ontario.

The Mining Act specifically places the onus for protection of such dormant workings on the owners, Mines Minister Spooner points out. Where this is not done adequately, the department may carry out protective work and charge it as a lien against the property.

Cdn. Prospect Plans to Offer Share Exchange With Cdn. Exp

Shareholders of **Canadian Prospect** will be asked to approve a proposal to acquire all or nearly all the outstanding shares of **Canadian Export Gas** at a special meeting October 30 in Calgary.

Basis of the offer to Canadian Export shareholders would be 2½ shares of Prospect for each share of Canadian Export.

It would be a marriage of oil and gas interests since Canadian Prospect has concentrated on oil exploration and development while Canadian Export has extensive natural gas holdings.

Mid-week market price of Canadian Prospect was $2.40. Shares of Canadian Export Gas were trading at $5.75.

Shareholders of Canadian Prospect, which already holds 595,950 Export shares or about 25% interest, will be asked to approve an increase in capitalization from the present four million to 12 million shares.

If all Canadian Export shares are exchanged in the offer, another 4,378,470 Prospect shares would have to be issued. Present issued capital of Canadian Prospect is 2.7 million shares.

The two firms first began discussing a merger or similar proposal early in the summer (**FP**, July 6).

Management of Canadian Prospect intends to continue the corporate existence of Canadian Export, President Wilbur L. Griffith says. It would be operated as a subsidiary under the combined management of the two firms.

Bulk of Canadian Export's gas reserves are located in the general area of the route of the **Alberta Gas Trunk Line Co.**, gathering system for **Trans-Canada Pipe Lines.**

Company has committed substantial amounts of its reserves to Trans-Canada and to **Saskatchewan Power Corp.** under long-term contracts.

Canadian Export has 121.2 billion cu. ft. of proven developed natural gas reserves and 279.99 billion cu. ft. of proven undeveloped gas reserves, according to Mr. Griffith. Canadian Prospect reports oil reserves of 1.1 million bbl. and no gas reserves.

CAMPBELL RED LAKE MINES had gross production of $1,252,523 from 66,80[illegible] tons milled in the third quarter this year. This compares with $1,175,150 in the second quarter and $1,203,359 in the third quarter last year.

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ANNOUNCEMENT

M. M. DILLON & COMPANY APPOINTMENTS

W. K. CLAWSON, P.ENG.

J. J. HEFFERNAN, P.ENG.

R. A. CRYSLER, P.ENG.

M. M. Dillon, President of M. M. Dillon & Co. Limited, Consulting Engineers, announces the appointment of W. K. Clawson as a Vice-President of the Company and Manager of the Company's Toronto office.

A graduate of the University of Toronto in Civil Engineering in 1940 — he served with the Royal Canadian Engineers until 1945, retiring with the rank of major. He became a member of the Firm in 1951 and has since headed the Company's Municipal Department. Prior to 1951 he served for one year on the staff of the Horton Steel Company Limited and for five years as County Engineer for the County of Middlesex.

He is a member of the Association of Professional Engineers of Ontario, and Engineering Institute of Canada, the American Waterworks Association, the Canadian Institute on Sewage and Sanitation and the Community Planning Association of Canada.

J. J. Heffernan is appointed a Partner of the Company in charge of development. He is a graduate of the University of Toronto with a B.A.Sc. degree in Mechanical Engineering and later with a M.A.Sc. (Public Health Engineering).

Prior to joining the staff of the Company he served with the Royal Canadian Engineers as Works Engineer in Manitoba including the construction at Ft. Churchill. He later held the appointment of Second-in-Command of the Design Section of the Directorate of Works at Army Headquarters. Since 1934 he has been employed by the Company as Senior Project Engineer.

He is a member of the Association of Professional Engineers of Ontario, the Engineering Institute of Canada, the American Waterworks Association and the Canadian Institute on Sewage and Sanitation.

R. A. Crysler is appointed a Consultant of the Company. Mr. Crysler became a Director of the Company in 1953 and Manager of the Company's Toronto Office.

A graduate of the University of Toronto in Civil Engineering, he was employed for two years as Senior Structural Engineer for the H. K. Ferguson Company of Cleveland, Ohio, and for a period of five years was in charge of structural design for Chapman and Oxley of Toronto, Ontario. In 1932 he joined the staff of the Canada Cement Company Limited as Structural Engineer. During his service with the Canada Cement Company he acted in a consulting capacity to the Federal Government and certain Provincial Government Departments as well as to engineers and architects throughout Canada in connection with the design and supervision of large concrete structures.

Mr. Crysler specializes in reinforced concrete design and construction, architectural monolithic concrete construction, soil-cement paving and concrete mix design and control.

He is a member of the Association of Professional Engineers of Ontario, the Engineering Institute of Canada, the American Concrete Institute and the Canadian Standards Association.

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- Bank of Canada, Toronto
- Imperial Oil Engineering Building, Sarnia
- St. Boniface Hospital, Winnipeg
- Devonian Building, Edmonton
- Burrard Building, Vancouver

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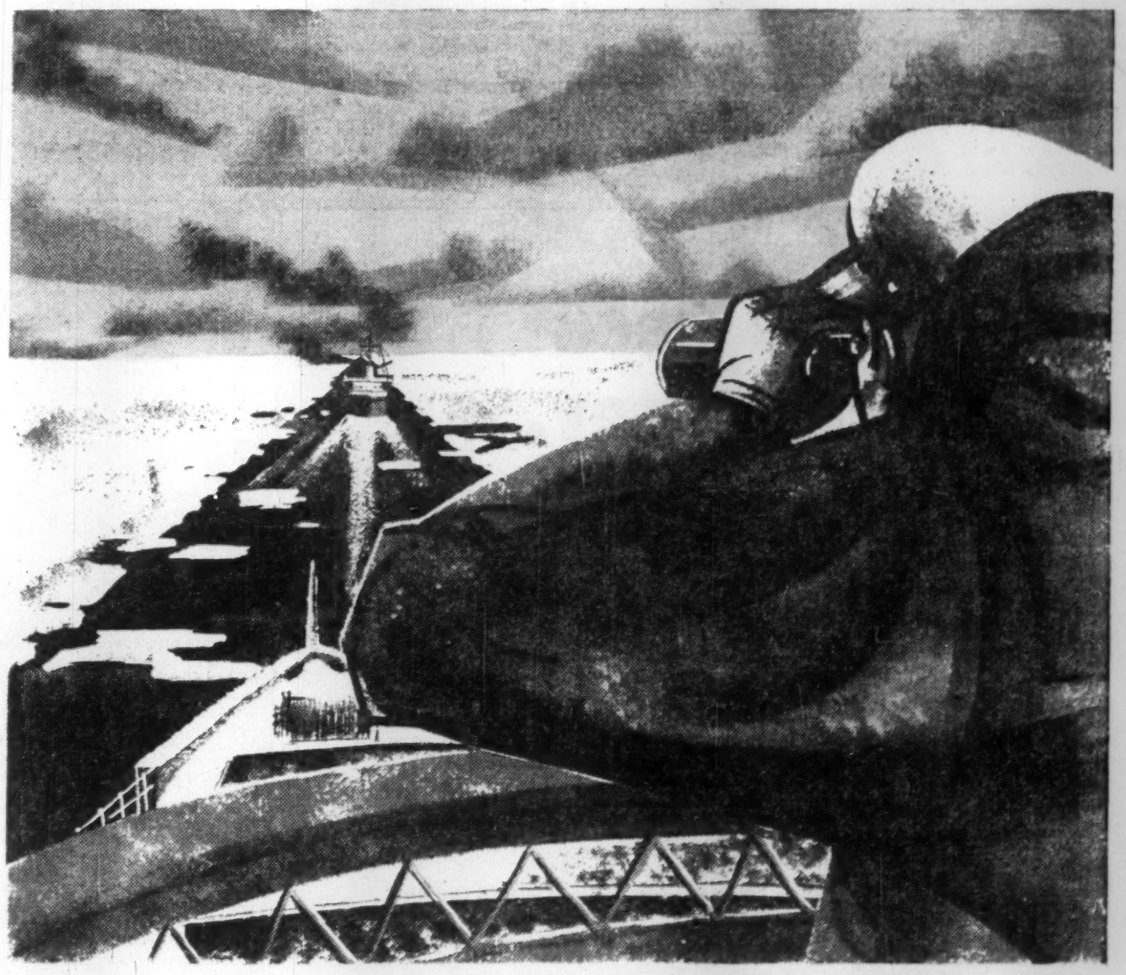

AIR BUBBLES — TOMORROW'S ICE BREAKERS

Atlas Copco pioneers iceless channels with "Air Bubble" system

Many companies requiring ice breaking operations every winter can now look forward to a more economical solution through Atlas Copco's revolutionary "Air Bubble" system, already proven effective for clearing ice from ferry lanes, launching slips, logging ponds and hydro dams. Prospects are bright for immediate larger-scale applications—and further development of this system could possibly bring even more dramatic results in the future.

Developed and made practical by Atlas Copco, the "Air Bubble" system consists of perforated polythene pipe laid near the bottom of a lake or river. Atlas Copco compressors blow air bubbles through the pin-prick holes, bringing the warmer water to the surface to melt the ice.

This engineering feat is yet another example of pace-setting advances by Atlas Copco, world leader in the development of economical compressed air and rock drilling equipment.

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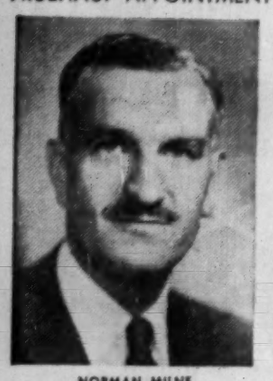
FRUEHAUF APPOINTMENT



NORMAN MILNE

Norman Milne has been appointed Plant Manager, in charge of manufacturing operations across Canada for the Fruehauf Trailer Company of Canada Limited, it has been announced by R. J. Telford, Vice-President and General Manager. Previously with Reo Motors Inc., Mr. Milne joined Fruehauf two years ago as Planning Manager.

N.S. LEADS AGAIN! COAL

Total coal production for 1956 showed substantial increase. Other mineral productions also led the field.

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Halifax, N. S.

Bank Staff Changes

Toronto-Dominion:

J. D. McGILLIVRAY, liability officer, 102nd Ave. & 102nd St., Edmonton, to be accountant, Vegreville, Alta.

D. F. BELL, acting accountant, Cornwall, Ont., to be accountant, Lyndhurst, Ont.

M. W. EARL, first assistant accountant, 1492 Yonge St., Toronto, to be accountant, Cornwall, Ont.

R. C. SMITH, assistant accountant, Douglas & Yates, Victoria, to be accountant, Kingsway & Fraser, Vancouver.

C. L. ROTH, assistant accountant, 19 King St. E., Kitchener, to be accountant, Simcoe, Ont.

R. W. GABLE, assistant accountant, King & Queen Sts., St. Catharines, to be accountant, South Porcupine, Ont.

H. FINNSSON, assistant accountant, 713 Columbia St., New Westminster, B.C., to be accountant, Quesnel, B.C.

J. D. MILLIDGE, assistant accountant, St. Jean Baptiste, Montreal, to be accountant, Jean Talon & St. Urbain, Montreal.

K. W. BROWN, assistant accountant, Oyen, Alta., to be accountant, Marwayne, Alta.

J. G. FINLAYSON, assistant accountant, Queen & Lee, Toronto, to be accountant at that branch.

L. BEAUDOIN, assistant accountant, Queen Mary & Decarie, Montreal, to be accountant, Verdun & Melrose, Verdun.

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R. P. Boddy, R. H. Grant, W. H. Penhorwood, G. Tremblay, J. A. Brown, G. M. McGregor, H. W. Rowlands, R. Davidson, D. G. McLaren, G. W. Rutledge, R. C. A. Waddell

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MINERAL DEVELOPMENT

U.S. Money Gets Tax Advantage

'Canadian investors have for many years been working under a tax handicap . . .' An expert studies the problem . . .

U. S. investors have a tax advantage over Canadian investors in mineral development in Canada.

This has been one of the reasons behind the continuing increase in the proportion of U. S. investment in Canadian developments.

So says John McDonald, a Toronto lawyer with a special knowledge of tax laws, and a regular FP contributor who some time ago examined the difference in tax treatment of investors on both sides of the border.

His study for the Saskatchewan government resulted in a series of recommendations which he felt would place Canadian investors on a par with U. S. investors.

Here is a digest of the points he raises

Canadian investors concerned with the development of mineral resources have for many years been working under a tax handicap.

This handicap lies principally in the tax treatment of current expenses and losses incurred in mineral exploration and development.

The reason for this is that the tax treatment of an expenditure — that is, whether or not it is deductible in computing income subject to tax, directly affects the investor's **estimate of risk.** That estimate determines whether mineral rights will be acquired, and at what price. It also determines how much will be spent in exploration and development.

The importance of the tax treatment of expenditures and losse lies in that fact that where a deduction is allowed, the expenditure or loss is shared by the revenue inversely in proportion to the marginal rate of tax imposed on the investor. Where a deduction is not allowed, on the other hand, there is no "tax benefit."

The importance of this tax benefit may be illustrated by comparing a U. S. corporation and a Canadian corporation confronted with an oil lease "play" in southeastern Saskatchewan.

Both companies know that the area is geologically promising, and two or three discovery wells at key points have convinced their geologists that a maximum coverage of mineral rights is a commercial necessity.

At this point the U. S. corporation proceeds to set the freehold bonus price it will pay to the farmers of the area for a lease of oil and gas rights. This price takes into account the tax deduction allowed if a lease is abandoned without production.

Worth $20

Because most leases are abandoned without production, this means that a lease worth $10 an acre in the absence of income tax is worth $20 — because a deduction of $20 costs the U. S. corporation only $10 — the U. S. Treasury "pays" the other $10 in reduced revenue.

The Canadian corporation, also competently advised, estimates the bonus price at $10 an acre. Because lease acquisition costs are non-deductible capital expenditures under Canadian tax law, it sends out its land men with $10 authority.

It is nos strange that the U. S. corporation gets the lion's share of the leases.

The Dominion Bureau of Statistics subsequently reports, with expressions of mild surprise, that Americans seem to be doing most of the oil business in Canada.

The DBS will probably — unless the law is changed — be recording the same mild surprise in the near future about the mining industry.

In 1951 the U. S. Congress passed a law which permits U. S. taxpayers to deduct current mineral exploration expenditures (up to $100,000 a year) in computing income from all sources.

This report therefore recommends the following changes in the income tax law of Canada:

(1) Members of partnerships and syndicates formed for the purpose of mining or exploring for minerals or exploring or drilling for petroleum or natural gas should be permitted to deduct, in computing income from oil and gas or mineral production, the prospecting, exploration and development expenses incurred by them in searching for minerals in Canada.

Section 83A(4) of the Income Tax Act grants this type of deduction to oil and gas firms. The only apparent reasons for the omission of mining partnerships and syndicates from the statutory allowance are:

The pre-production expense allowance of Income Tax Regulations.

The fact that as a matter of custom most post-prospecting expenses are incurred by development corporations to which newly discovered mineral properties are transferred.

There appears to be no compelling reason why the allowance should not be allowed in both the oil and gas and mining industries.

(2) Members of partnerships and syndicates formed for the purpose of mining or exploring for minerals or exploring for, producing, manufacturing or marketing petroleum or natural gas should be permitted to consolidate profits and losses derived from different partnership or syndicate ventures in a taxation year, without any time limitation upon the carry-over of losses.

No Returns

Partnerships and syndicates are not "taxpayers" under the Income Tax Act. They do not file income tax returns. Their income, for tax purposes, is currently attributed to their members whether or not it is withdrawn by the members as distributable profits.

Businessmen and accountants usually regard a partnership or syndicate as a separate business entity. At law — both general and tax — it is no such thing.

In effect, the present law says that if a man puts all his money in the same firm he may so consolidate; but if he diversifies his participation among several firms he cannot state his real income position for tax purposes. Further, it is anomalous to exclude mining partnerships from the benefits of the section.

(3) The allowance of present s. 83A(4) of the Income Tax Act, as broadened under paragraphs (1) and (2) above, should be extended to individuals acting as such and not in association with others.

The effect of the foregoing amendments would be to allow the consolidation of profits and losses attributable to mineral exploration and development to all non-corporate entrepreneurs.

For example, an individual who made a dry hole contribution in Alberta would be permitted to offset the payment against income received by him from a mining syndicate in New Brunswick. Similarly, a member of an oil and gas exploration partnership in Saskatchewan would be permitted to deduct the cost of grubstaking a prospector in the north in computing his income from the partnership.

(4) (a) Section 83A(6) of the Income Tax Act should be amended to permit the deduction of bonuses paid for Crown Reservations and Drilling Permits as well as leases and the deduction should be allowed upon surrender of the Reservation, Permit or lease without production having been obtained in "reasonable commercial quantities."

(b) Section 83A(6) should be expanded to cover freehold bonuses.

(c) Section 83A(6) should also be expanded to include freehold and Crown bonuses paid for rights to explore for and develop precious metal, base metal and industrial mineral mines.

No Lower Revenues

These amendments would not result in an excessive reduction of government revenues.

Level Set

The mineral rights "price level" has already been set by U. S. developers who have taken their domestic tax treatment into account. The amendments would merely bring Canadians into a competitive position in the context of present prices.

Governments will be substantial beneficiaries of any price increase that does occur because governments control the larger part of the country's mineral rights.

Persons who speculate in mineral rights must pay income tax at ordinary rates on their profits. This fact should restrain any impulse to trade up bonus price levels for land already held for exploration and development.

Government tax revenues would be increased in proportion to the increased production of minerals resulting from the stimulation of development activity. It should be emphasized that the amendments deal only with working or operating interests. There is no tax relief for the royalty speculator or the so-called "portfolio investor."

(5) Individuals, whether acting alone or as members of partnerships or syndicates, should optionally be entitled to deduct, in computing income **from all sources,** an amount equal to the **lesser** of:

(a) all expenses incurred in the year and in prior years (to the extent that prior years' expenses were not deducted) in searching for minerals or drilling or exploring for oil or gas in Canada including the cost of acquiring P. & N.G. leases and mineral claims or operating interests therein

(b) $25,000, and

(c) one half of taxable income in the year of deduction determined before the deduction is taken into account.

An election to deduct expenses under this provision for a taxation year should be irrevocable, and should not affect the rights of persons with whom an electing taxpayer is associated in a partnership or syndicate unless such persons also elect to take the deduction.

This suggested amendment would provide Canadian individual taxpayers with a statutory deduction approximately equivalent to the allowances currently available to U. S. taxpayers.

Special Plan

Americans are permitted to deduct intangible drilling and development expenditures upon abandonment of an oil or gas property, and to deduct mining exploration expenses up to $100,000 a year for four years. These deductions are admissible in computing income from all sources.

Canadian individuals may be expected to increase their direct participation in oil and gas and mineral exploration if their income tax treatment permits them to compete on an equal footing with nonresident competitors.

As an example of the operation of this proposed amendment let us assume that a taxpayer contributes $10,000 toward a diamond drilling job in exchange for an interest in the mineral property or an interest in a corporation that owns or will own the property. Assume further that the taxpayer's taxable income for the year was $40,000.

If the venture is successful the taxpayer **excludes** the value of his share of the mineral property — or the value of corporate shares received by him — from income.

If the venture is unsuccessful, the tax result under present and proposed law would be:

	Present	Proposed
Taxable income	$40,000	$40,000
Mineral expenditures	.....	10,000
½ Taxable income	.....	20,000
Amount deductible	.....	10,000
Revised taxable inc.	.....	30,000
Tax	15,360	10,560
Tax reduction	.....	4,800

(6) As an alternative to the foregoing proposed deduction, individuals whether acting alone or as members of partnerships or syndicates should optionally be entitled to deduct from taxes, an amount equal to the lesser of

(a) a predetermined percentage of all expenses incurred in the year and prior years (to the extent that prior years' expenses were not deducted in computing income or from tax) in searching for minerals or drilling or exploring for oil or gas in Canada, including the cost of acquiring P. & N.G. leases and mineral claims or operating interests therein,

(b) one half of tax payable for the year determined before the tax credit is taken into account, and

(c) $12,500.

The predetermined percentage of expenses deductible under this provision could, if desired, be based upon a partially regressive rate schedule ranging from 60% in the case of taxable income of $10,000 a year or less to 25% in the case of taxable incomes in excess of $50,000 a year.

If the percentage tax credit is fixed according to a regressive rate schedule, the value of the credit is relatively greater at the lower levels of income.

Precedents for a tax credit of this type exist in the Income War Tax Act.

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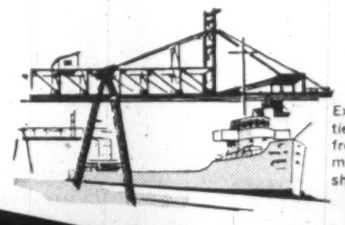

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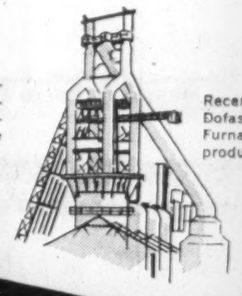

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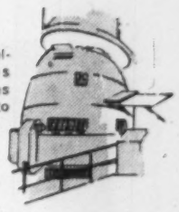

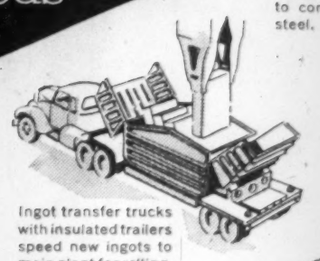

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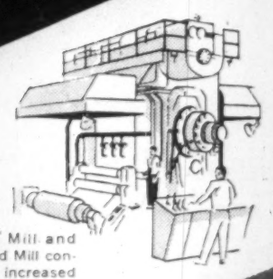

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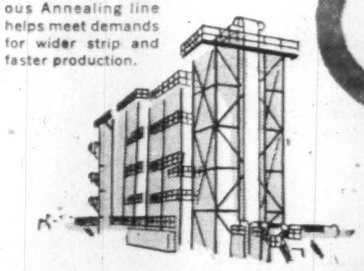

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Letter from London

by Adelphi II

It's Been a Great Week For Satellites and Golf

It has been a memorable week. Great Britain won the Ryder Cup. The Russian satellite has girdled the earth many times. And there has been little in the Press about the Oliviers.

Nor must we omit to mention that the Socialist conference broke up trailing clouds of comradeship and undivided loyalty among the delegates. At least, that is what the public were told.

Behind the scenes there were bitter recriminations, especially about Aneurin Bevan's complete reversal of attitude to the H-Bomb.

A few weeks ago he was dead against Britain continuing with the manufacture of H-Bombs. Now he says that we cannot act on our own. Bevan has, in other words, thrown over the Bevanites.

In the judgment of many Socialists he has also begun the disintegration of his party.

His turnabout is explained by his supporters on the ground that when he went to Moscow he was shown exactly how superior the Russians are to the rest of the world in technical achievement, and was convinced that they mean to use their superiority as a threat wherewith to impose their will on humanity at large.

* * *

There is, of course, no doubt now that the Russians have a great deal up their sleeve, and it is not without irony that Kapitza received his training here and at English expense.

Incidentally, the Communists here brag openly that one of their many advantages is that neither the U. S. nor U. K. can be certain that among their nuclear scientists there are not men who, when the hour strikes, will run off to Russia with the knowledge and secrets that they have acquired of U. S. and British scientific developments.

Russia looks upon peace as merely a continuation of war by other means. That is why the Soviet can keep the free world on edge.

But whoever might have produced the first man-made moon, the event would have marked the passing of the human race, at a single jump, into an entirely new era. Khrushchev has written-off the bomber, and he is right. It is as out of date as bows and arrows.

But if every one of the great Powers is going to produce man-made moons, the suffering taxpayers cannot hope for any alleviation of their burdens.

What will be saved on the bombers will be more than spent on the satellites. Fantastic sums are mentioned as the cost of the device that has bleeped its way round and round the earth.

* * *

It's Nothing To Rejoice About

It provides some indication of our financial predicament that we are asked to rejoice over the "strengthening" of the pound to a fraction over $2.80. It is clutching at a straw.

The raising of Bank Rate and the partial stoppage of capital investment will not solve our problems unless the unions' demands for higher wages are refused, and if the bureaucracy persists in spending on a prodigal scale.

Already the sunshine-talkers are speculating on the date when Bank Rate will come down. They would be more usefully employed in warning the public that it may have to rise still further.

Adam Smith wrote nearly 200 years ago.

He did not mention inflation, but that he had in mind when he said: "When national debts have once been accumulated to a certain degree, there is scarce, I believe, a single instance of their having been fairly and completely paid. The liberation of the public revenue, if it has been brought about at all, has always been brought about by a bankruptcy; sometimes by an avowed one, but always by a real one. . . . The raising of the denomination of the coin has been the most usual expedient by which a real public bankruptcy has been disguised under the appearance of a pretended payment."

Unfortunately, this juggling-trick is much easier to perform in this generation of paper money, and the people who have to take the brunt are those who patriotically acted on the government's innumerable appeals to subscribe to government issues. It is the same everywhere.

* * *

The Sunday newspapers were quick to follow the example of the dailies in putting up their prices, a move which has been rendered inevitable by an all-round increase of costs in the industry.

A walk through the Fleet Street area is a depressing business, for there one sees, as everybody admits, three men doing one man's work, and getting highly paid for doing it.

The wind blowing through Fleet Street grows colder and colder. Journalists are wondering apprehensively which of the weaker brethren will be the next to put up the shutters for good.

* * *

Stock Market 'Speculates'

In the stock markets, opinion is more or less equally divided about the future. Half are bulls and half are bears. Happily, the settlement passed off quietly.

There were fears that the heavy falls caused by the 7% would result in some firms unable to meet their commitments.

With the settlement safely concluded, the Stock Exchange breathed again, and the signs are that for the next few weeks, at any rate, prices will rise a little at the beginning of the account and sink back as the account nears its end. Some first-class shares are obviously standing at an unduly low level. This is the sort of situation which Hetty Green accepted as a signal to buy.

* * *

It will be interesting to see the result of the Ipswich by-election. The Liberals are making a vigorous effort there, although they are not so foolish as to hope for a win.

What they hope to do is to poll as many votes, in proportion, as they did at Gloucester. If their hopes are realized they will interpret it as proof positive that a Liberal revival is on the way.

One need not be a Liberal to wish them luck, for they have been 40 years in the wilderness and they deserve at least a glimpse of the promised land.

They might have more than a glimpse if only they would not quarrel among themselves so often, and if they would abandon speaking of the Tories as if they were a mixture of Scrooge and Simon Legree.

* * *

Fine Weather For Politics

Anyway, the candidates are all, irrespective of party, fortunate in one respect. They are electioneering in fine weather. October, so far, has been an Indian summer, and London is looking its best in Keat's season of mists and mellow fruitfulness.

The doctors tell us that with this beautiful weather we should be extremely healthy, and that influenza would not claim many victims if it were not given so much space in the newspapers.

Children have only to complain of a headache for them to be sent off to bed. As for the adults, it is once again noticeable that most of them improve rapidly as Friday, which is pay-day, approaches.

Brighton has been conspicuously in the news because of the political conferences.

Now that the politicians have returned to their native heaths, Brighton is still on the front pages by reason of the inquiries that a strong team from Scotland Yard is conducting into the alleged rackets that, with the alleged —British libel laws enforce the repetition of that adjective—collusion of some members of the local police, have been profitably operated by crooks from London.

London crooks, whether on rackets or pleasure bent, have always been fond of Brighton.

MORGAN S. CROCKFORD

secretary, Excelsior Life Insurance Co. has been elected president, Life Insurance Advertisers Association, in Philadelphia. He is the first executive of a Canadian company to head this international body, which will observe its 25th anniversary in Montreal, next year.

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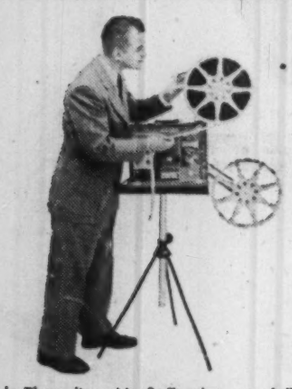

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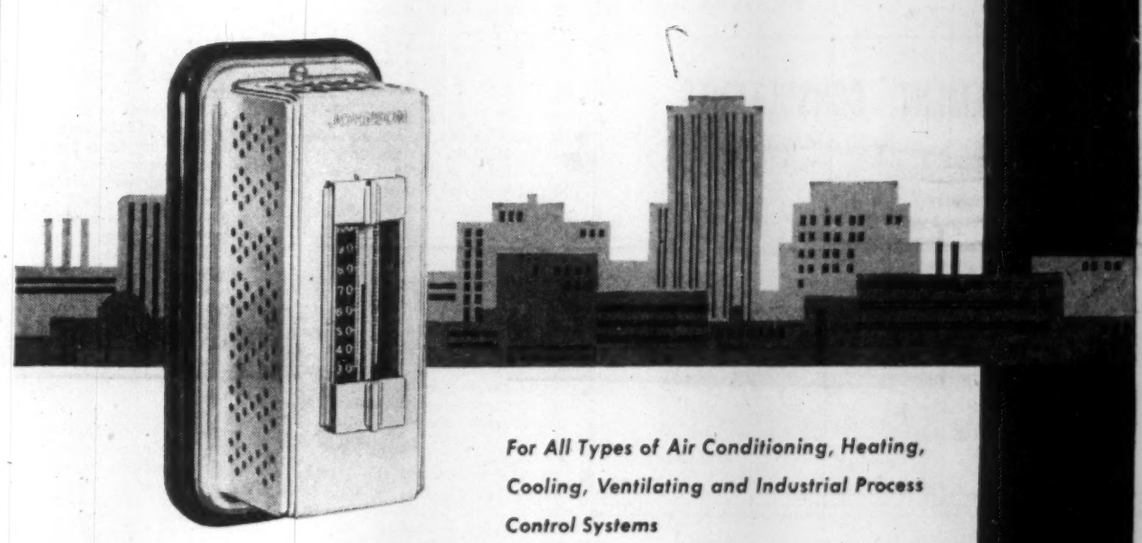

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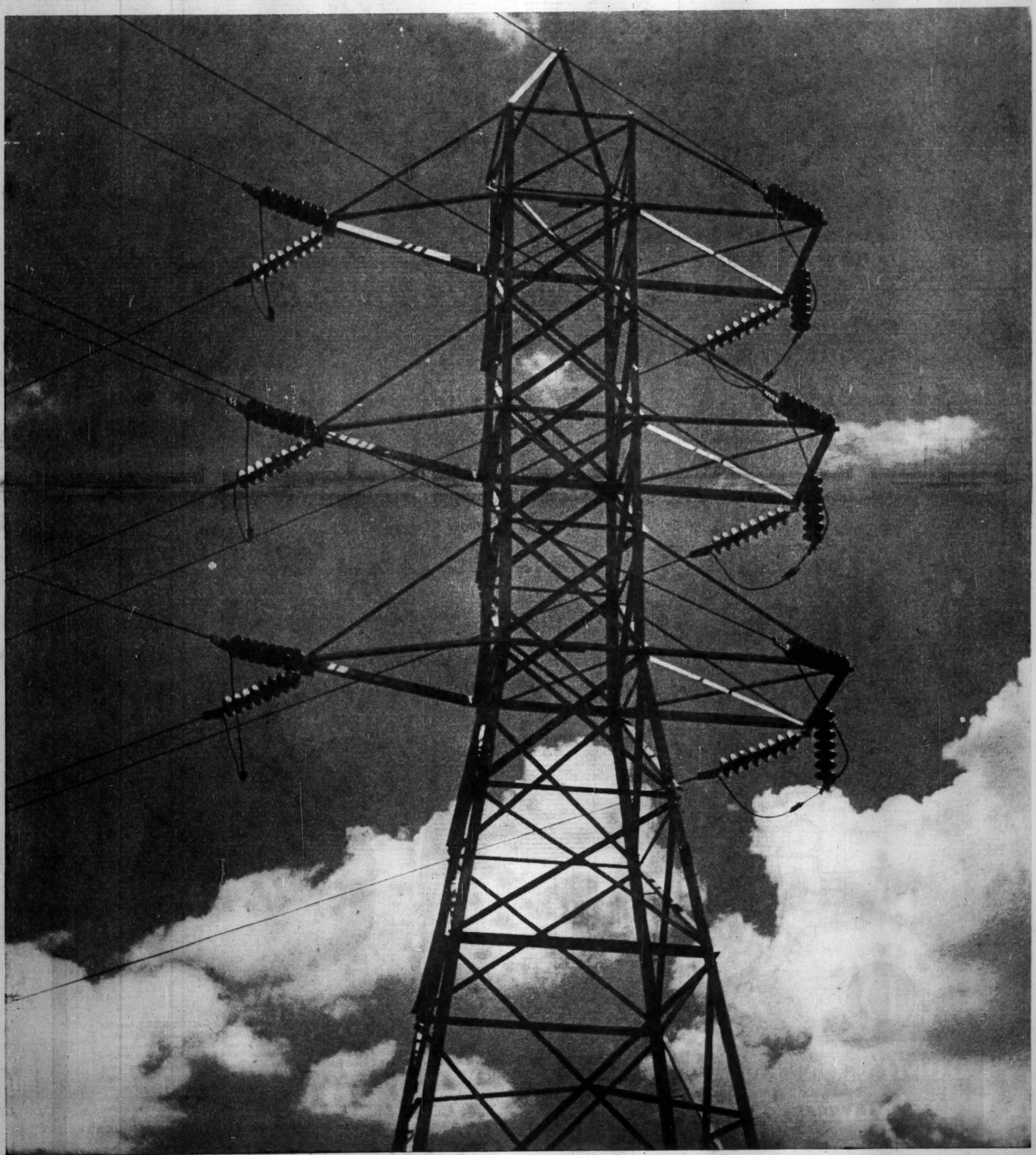
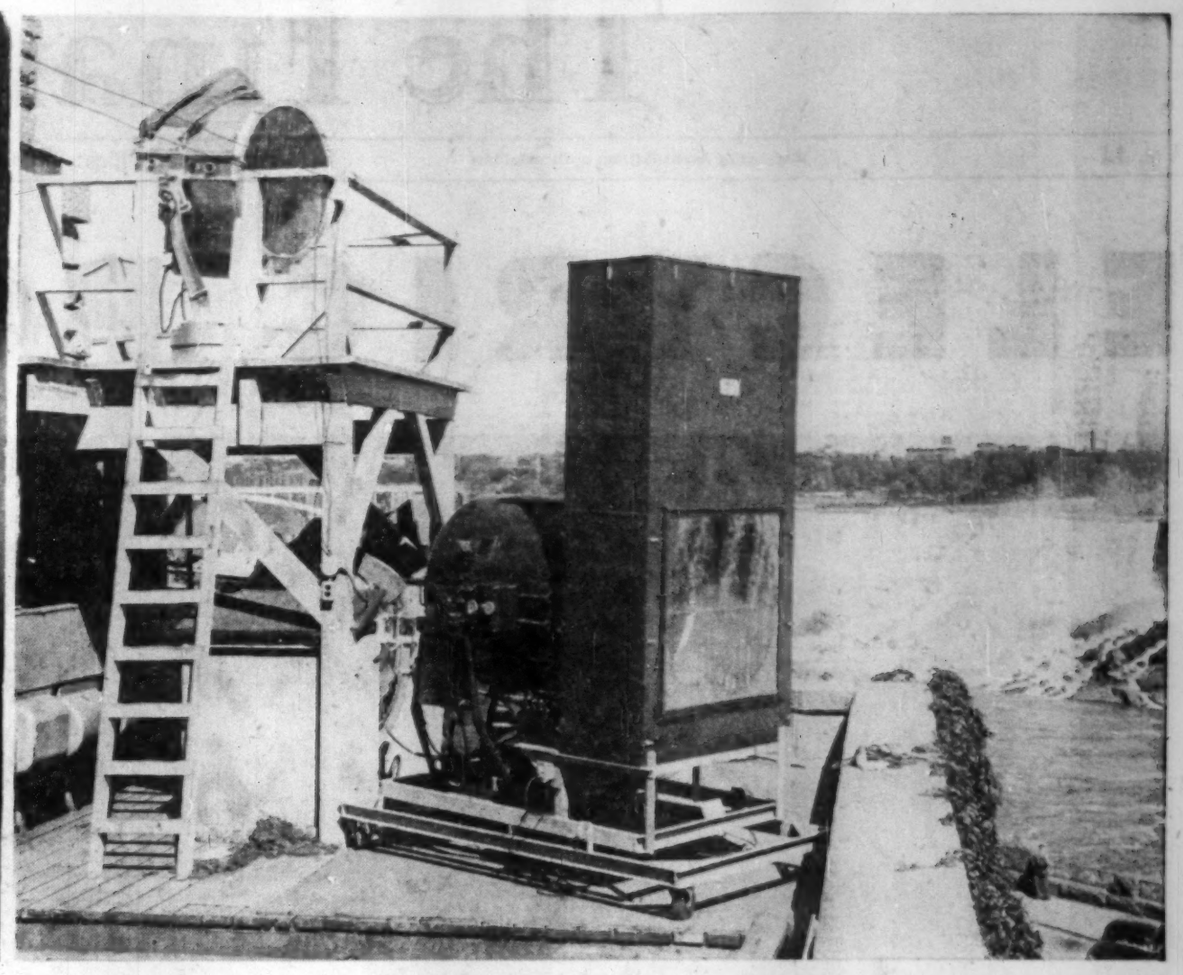
ELECTRIC POWER

a feature report





Brilliant beam of Niagara Falls' new lighting outshines the old. The powerful searchlights are mounted up to 3,000 ft. from the falls.

'New Light' on Niagara Falls

A Canadian lighting specialist left by air for England last week to check on the start of what is probably the most important lighting job to be undertaken in North America in recent years from a prestige point of view.

The job: A powerful new installation to illuminate the waters of Niagara Falls, providing 10 times the brightness of the existing equipment on the same amount of power, and incorporating a device to improve and diversify color effects.

The requirements: To install and have operating by July next, 20 specially-designed units with each floodlight planned to give a beam intensity of 210 million candlepower, and automatic color changers providing 15 color variations.

The contract, worth $154,000, has been awarded to **Amalgamated Electric Co.,** which has branches across Canada and a plant employing over 1,000 people in Toronto. Amalgamated is an associate of **General Electric Co. of England,** and the contract is being handled through **Northern Electric Co.,** Amalgamated's distributor.

Amalgamated Electric has already been responsible for a series of important scenic lighting projects in various parts of Canada. Among its work has been the floodlighting for the **Canadian Bank of Commerce** head office, highest building in Canada, and the new **Imperial Oil** building, both of them in Toronto. Another is St. Joseph's Oratory in Montreal.

But the job for Niagara was in a class by itself. The prestige attached to illuminating a world scenic wonder like the Falls excited even Amalgamated's giant English parent, GEC.

That was why profit became a secondary consideration when preparations were started to prepare a bid for the job.

Two Years' Research

Behind the award of the contract lie two years of investigation and research, carried on mostly in England from the moment when it was first learned that the existing lighting installation at Niagara Falls was to be replaced.

And even after the final choice of light source, color medium, materials and design had been made, spectacular tests were carried out in the U. K. to check that the new units would provide the required effects and stand up to the rigorous conditions at Niagara Falls.

Some of these tests were carried out on a hillside with three fire departments and their biggest equipment hired for the occasion. The firemen shot streams of water over the hill while the first unit was being tested and smoke bombs, secured from a film company, were set off at the same time to simulate spray.

The type of light source was probably the most difficult decision. Low intensity carbon arcs are used at present but there have been tremendous developments in lighting since these were installed over 30 years ago.

Incandescent lamps had no advantage because of the Commission's wish to keep to the present load but increase the illumination.

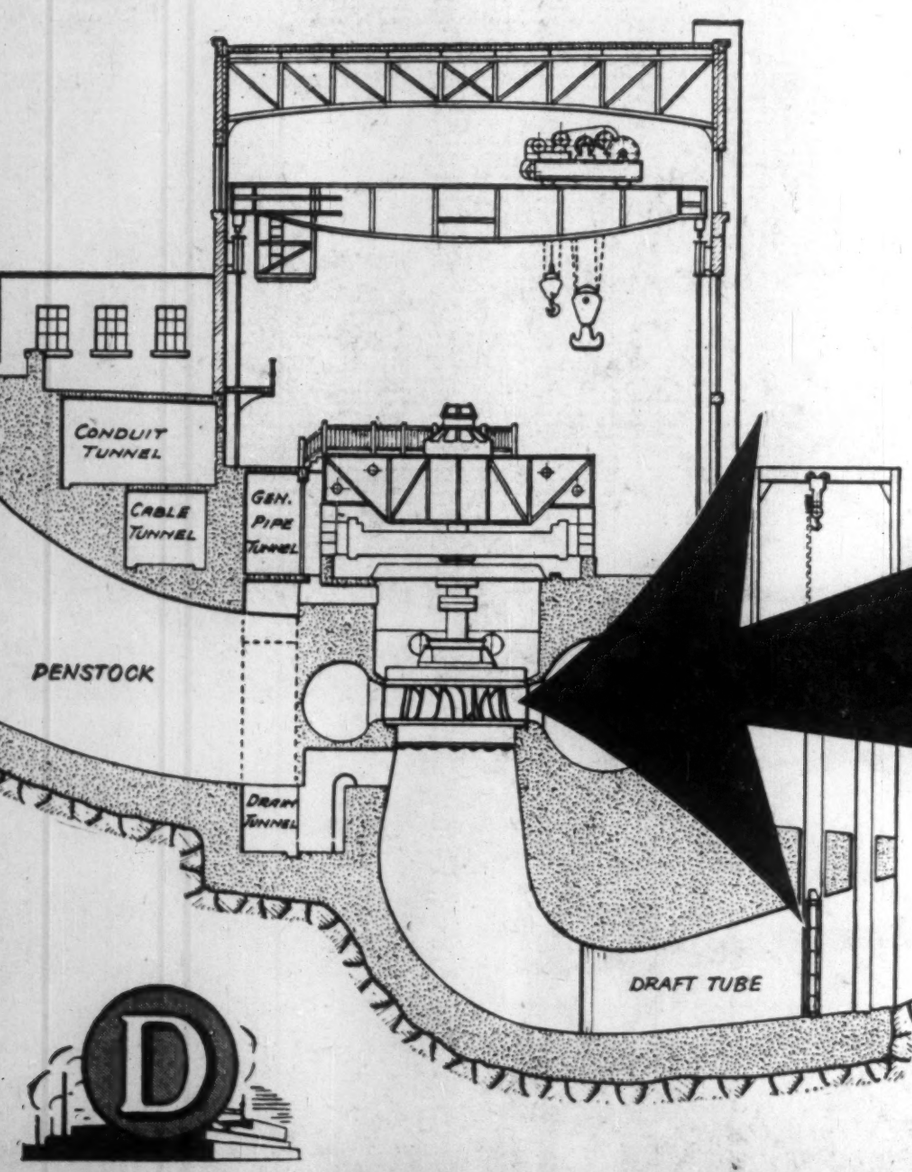
Color corrected mercury also lost out because, even with filters, it was not possible to obtain all the requisite colors, and the source brightness was insufficient.

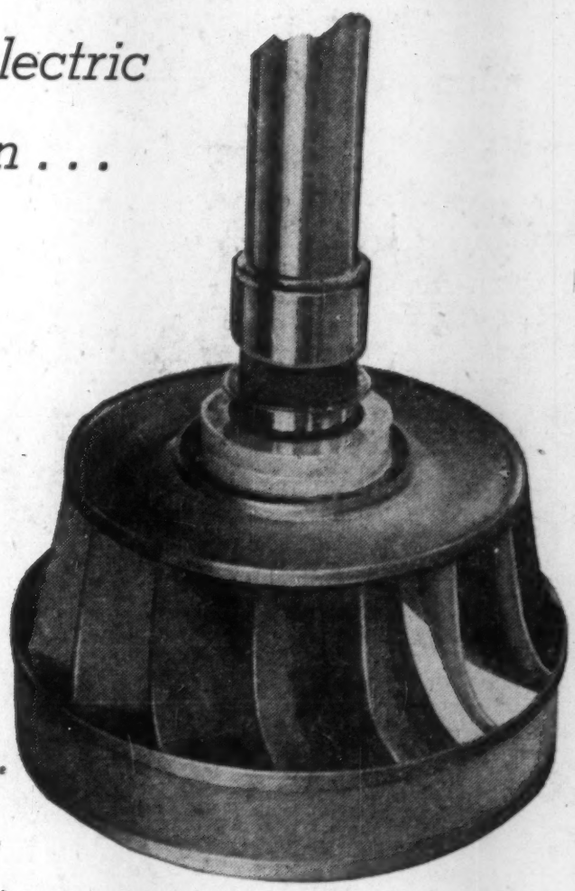
Seriously contemplated was the newly-developed Zenon compact source lamp. It is the most recent light source and its brightness and

(Continued on page 65)

The Hidden Heart

of a hydro-electric power station . . .





Dominion Francis Type Hydraulic Turbine

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Dominion Engineering is proud to join in the general tribute to the Hydro Electric Power Commission of Ontario, which has purchased hydraulic turbines rated at over 3,000,000 H.P. from this company. Dominion turbines are installed in fourteen stations throughout the province. Included are twelve 105,000 H.P. turbines installed in the Sir Adam Beck Niagara Generating Station No. 2 and four under construction for this project . . . a record achievement for a Canadian company that has designed and built turbines totalling over 11 million H.P. for the world market, including better than 50% of Canada's installed hydro-electric power.

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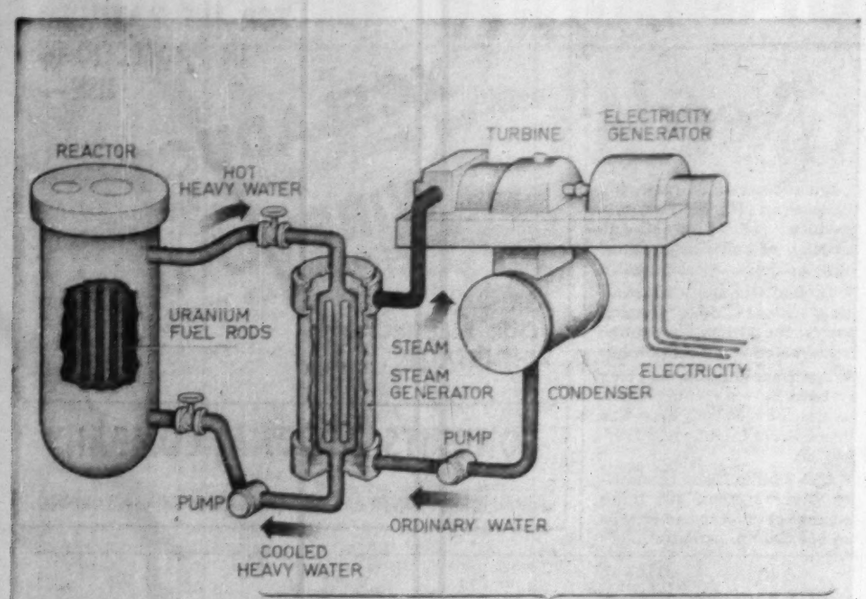


THIS PART OF ATOMIC POWER STATION FUNDAMENTALLY THE SAME AS CONVENTIONAL COAL-BURNING POWER STATION

SCHEMATIC DIAGRAM OF THE NPD ATOMIC POWER STATION

THESE TWO DIAGRAMS clearly demonstrate the major changes in nuclear reactor design which have delayed construction of Canada's first atomic power project. The steel pressure vessel used in the earlier design (top photo) has now given place to a horizontal cylinder of lighter design containing uranium fuel rods in pressurized tubes.

Atomic Power

Canada Lagging Too Far in This Race?

By LEONARD BERTIN

Construction of Canada's first atomic power station is being held up by a decision to make drastic alterations to existing plans.

The deadline for completion, originally 1959, has been shelved. No-one appears to be in a position to say, at present, when work will start again on the Ottawa River site 25 miles from Chalk River.

Meanwhile, in Canada and elsewhere, many are asking:

- Is Canada taking too long to get into the nuclear power business?
- Will she, later on, have cause to regret the experience that other countries are now gaining in the construction and operation of nuclear power plant while her own engineers and scientists dither around, striving vainly to achieve the impossible, the perfect answer?

Among those who ask these questions are engineers and scientists in many of the countries that shared none of Canada's initial advantages in the nuclear field.

They wonder why Canada, one of the three heirs to the wartime atomic birthright of nuclear know-how, has hung back and let other countries like France overtake her.

The reasons why those who direct Canada's atomic policy have decided against wide-scale construction of nuclear power stations at a time when electricity can be produced more economically from conventional plant have been set out eloquently recently by the chairman of Ontario Hydro.

They are mainly sound and there is little to say against them.

But wide-scale construction of atomic power stations is one thing. A careful exploration of the field, aimed at gaining constructional know-how and operational experience, is another.

Canada's Contributions

Canada has made some major contributions to fundamental knowledge in the nuclear field.

The NRX heavy water-moderated research reactor that she built at Chalk River immediately after the war was for many years the finest facility of its sort and the most powerful research reactor in the world.

Important work was done there on behalf of both the U.S. and the U.K. projects.

Canada now has some first-rate ideas about the most economic ways to produce industrial power from atomic reactors.

What the very canny "Three Wise Men of Euratom" thought about this work was clearly reflected in their report to the six member countries, France, Germany, Italy, Holland, Belgium and Luxembourg.

"Canada," they reported after their visit, "has done important work on a type of reactor which promises to be particularly well adapted to European requirements.

"It combines many of the advantages of the natural and the highly enriched uranium approaches followed so far by Britain and the U.S. respectively."

Unfortunately, the story, as far as Canada is concerned, ends there for the present.

Countries that have to make decisions now which may influence the pattern of their nuclear programs for years to come, are being influenced more easily in taking their decisions by power stations that have been built, and in particular, by power stations that have worked.

They want to know whether the design is going to prove economic, of course, but they also want to know that it is going to be reliable, easy to operate and to maintain.

They cannot afford to spend $50 million or more on each of a number of full-scale power stations and then have to close them down because of the belated discovery of some inherent defect in design.

That is why they find it difficult to decide in favor of others like NPD that exist only on paper.

Shortsightedness

The reader may argue that Canada has no interest in spending money on unprofitable stations simply for the purpose of providing information gratis for the benefit of other nations.

This may prove to be a short-sighted view. It will certainly pay no dividends.

One alternative that could be adopted for example, would be the type now approaching completion at Shippingport, Pa. This is a reactor based on exotic types of fuel that cannot at present be produced in Canada.

These are fuels in which the proportion of uranium 235 has been increased or "enriched."

The basic raw material here is still uranium, and it may still come originally from Canada. It will need to be processed, however, and in the U.S.

The trademark on the finished fuel elements will be a U.S. one. And it will be to the U.S. that the major profits and all the prestige will go.

What would have helped Canada's uranium position more than anything else at present would have been an ability to show to the world a working atomic power station based on natural uranium fuel that she herself can supply, that would be demonstrably economic now for some of the countries where conventional fuels are costly.

These countries include all the six Euratom countries and Japan.

It is a specious argument to say that there is no hurry . . . that Canada can always do this later.

The whole pattern of present development in the various countries shows that each nation tends to stick to the principles that she has gained most experience in, even if she feels that other alternative ideas might have their good points.

Thus Britain is building gas-cooled graphite-moderated reactors fueled with natural uranium because she gained a great wealth of experience in this type of reactor in the manufacture of plutonium for atomic weapons.

The U.S., by contrast, is using various types of reactor based on light water. Main reason for this is the experience that she has gained with the atomic submarine Nautilus.

It has been argued that to go ahead with the NPD atomic power station was at all times a costly enterprise.

The cost is, in fact, estimated rather optimistically at $15 million. It is more likely to be $20 million.

But what is this beside the $200 million that Canada has spent on the Avro Arrow, an aircraft that has never flown, may never fly in its present form, and which will almost certainly be the last in the line of manned interceptors?

The reason for embarking on the NPD so late has never been given.

The reason for stopping the project short now in its tracks may almost certainly be sought in the discoveries that:

1. The use of pressurized cooling tubes, as seen in the illustration, has a much bigger future for larger reactors than has the more conservative idea of the large all-inclosing but much more expensive pressure vessel; and
2. Research data gained subsequent to the original design study points to the advantage of a horizontal system. In this, fuel elements may be added or removed from either end. This permits relatively new fuel rods to be used side by side with others that are too far gone to make any contribution to the general neutron balance within the reactor but which are still capable of contributing heat.

Both these developments, outlined recently by Dr. W. B. Lewis, vice-president of AECL in charge of research and development, are important Canadian contributions that may have a far-reaching effect on the economics of atomic power.

The big question, that others must answer, is whether Canada was best served by delaying the construction of her first atomic power plant to incorporate them.

Would she have done better to have gone ahead with an idea that already represented the best opinions in Canada, in the interests of gaining experience as quickly as possible?

Canada's Atomic Background

NPD, Canada's "Nuclear Power Demonstration," was conceived in 1954. Unfortunately its parents have never been able to decide on when it could best be born.

Their problem seems to have been mainly one of money. No-one was very keen on venturing into a new field unless and until there were clear and tangible profits in view.

It was early in 1954 that a team of engineers and scientists first assembled at Chalk River to investigate the feasibility of natural uranium heavy water-moderated power reactors.

The team was made up of men from the Chalk River project and from several Canadian public and private utilities.

This group carried out "design studies" to determine the most attractive form for a power reactor.

The design studies compared, on an economic basis, the most suitable proportions of the reactor, fuel elements, coolant passages.

They also went into the relative merits of two coolants, or heat transfer liquids for passing the heat from the uranium fuel rods to the water boilers.

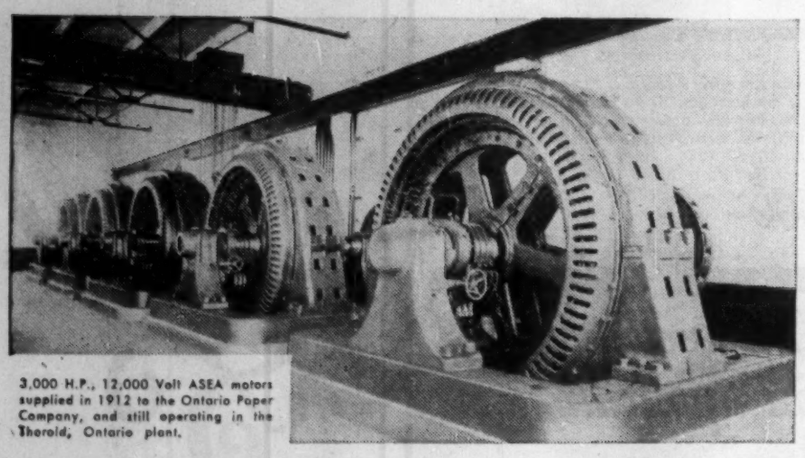
The two they considered were ordinary water and heavy water, a form in which the hydrogen atoms all weigh twice as much as those in normal water, and which was known to possess because of this, particularly favorable nuclear characteristics.

One other, very important, consideration that they discussed was whether, since the whole assembly would need to be pressurized, it was better to enclose the whole reactor in a large and very strong pressure vessel or whether merely to pressurize the tubes containing each of the many fuel elements.

The results of these studies seemed to indicate that a small, natural uranium-

(Continued on page 63)

A Revolutionary Idea 40 Years Ago . . .



3,000 H.P., 12,000 Volt ASEA motors supplied in 1912 to the Ontario Paper Company, and still operating in the Thorold, Ontario plant.

. . . and what it means today

"Curtis had another revolutionary idea. He proposed to drive the wood grinders with 2,800 horsepower electric motors using 12,000 volts right off the power line from Niagara Falls. By this means he planned to avoid the power loss in transformers to reduce the voltage. He discovered, however, that motors using 12,000 volts were not manufactured anywhere in North America. Undismayed, he ordered them from the Swedish General Electric Company (since renamed Canadian ASEA Electric Limited). The engineers who shook their heads when they first heard of Curtis' plan could not have believed that the same Swedish motors would still be running forty years later."

From the book "Trees to News" by Carl Wiegman

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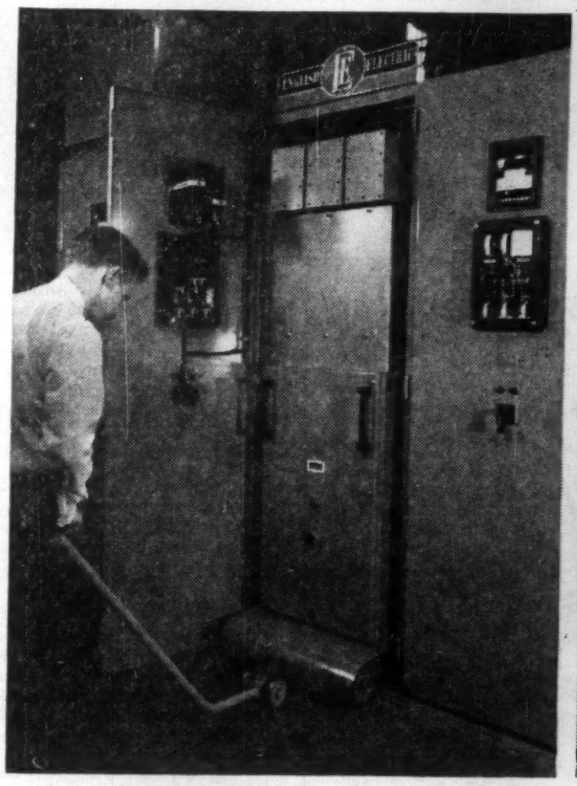
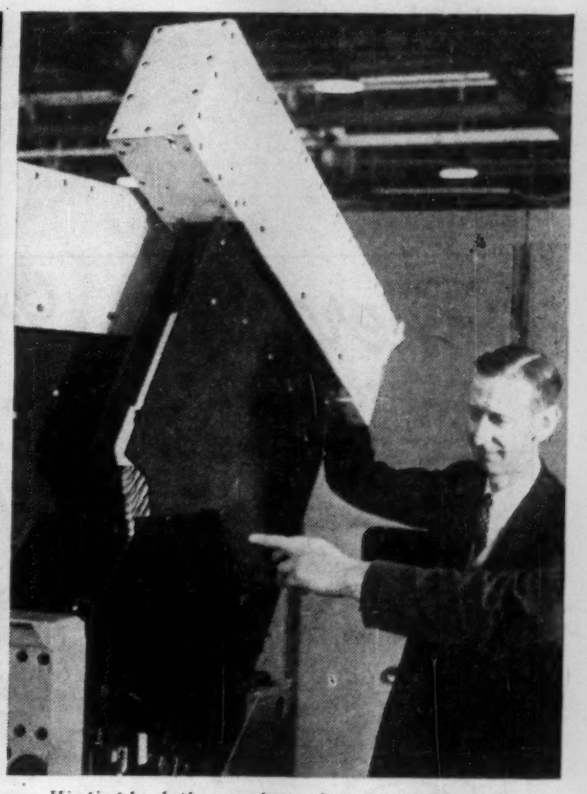
NEW METALCLAD SWITCHGEAR INCORPORATES HIGH PERFORMANCE AIR CIRCUIT BREAKERS



Removing the OB-50 air circuit breaker from an HD-50 metalclad installation.



Hinging back the arc chutes for contact inspection on the OB-50 air circuit breaker.

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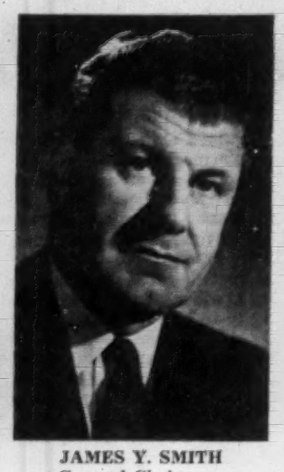
Power Show Chiefs

CHARLES E. BAKER
President,
Institute of Power Engineering



JAMES Y. SMITH
General Chairman,
Power Show

WILLIAM W. JAMIESON
Manager,
Power Show

Steam Aids Hydro

B.C.'s Urgent Needs

It was announced recently that **B. C. Electric Co.** would build a thermal generating station east of Vancouver.

The significance: That despite the vast untapped hydro potential of the province, electricity is to be generated by steam.

This strange situation has been brought about by the urgency of filling the power needs of B. C. and the conflict of opinion on the best way to do it. This conflict is mainly political. Its two aspects are failure to reach agreement between:

- Canada and the U. S. on sharing the downstream benefits of developing the Columbia River.
- Ottawa and Victoria on financing the Columbia development.

In the background there has always been a third conflict of interest: Between the power developers and the fishing industry.

This seemed to have died down for a time when B. C. Electric Co. announced that it would drop its development plans for the Fraser River.

But the controversy has broken out again only this month with the B. C. government claiming that the International Pacific Salmon Fishing Fisheries Commission is blocking development of a power project on the Homathko River.

Spoils Plan

Several alternatives exist for developing the Columbia. The most likely plan is to turn the Kootenay River into the headwaters of the Columbia, thus boosting the potential of the Columbia but at the same time spoiling a U. S. plan to build dams on its section of the Kootenay at Libby and Katka.

This diversion of the Kootenay would add an estimated 3,000 cu. ft. per second to the flow down the main stem of the Columbia. It would also feed all the power stations in the U. S. on the Lower Columbia.

But the cost is something like $250 million for building a 700 ft. dam at Mica Creek. Such an undertaking is likely to take 10 years to complete. It could generate between 2.5 million and 3.5 million hp.

Settlement of the international aspect is not made any easier by the federal-provincial quarrel on how Canadian participation will be financed.

It has yet to be decided whether the Upper Columbia development will be carried out by the government-owned **B. C. Power Commission** or the privately owned B. C Electric Co.

Urgency is added to these political problems by the plain fact that B. C. is running out of power.

This was emphasized by the Gordon Report estimate that by 1975 B. C. will need 12.5 million hp. This is an increase over present power demand of no less than 457%.

A $3 Billion Program

The present generating capacity of B. C. Electric is 711,000 hp. Up to 1960 the company expects to have to increase capacity at the rate of 15% per year on a compound basis.

After 1960 the tentative estimate is a growth rate of 10% compounded annually.

In terms of horsepower the current 711,000 hp. has to be increased to 1.5 million hp. by 1960, 2.4 million hp. by 1965, 6.2 million hp. by 1975 and 10 million hp. by the end of 1980.

In terms of dollars that represents a $3 billion program.

A. E. Grauer, president of B. C. Electric, has stated his company's position clearly. He said that B. C. Electric has under construction three different hydro developments which will meet its requirements until 1962.

After that year the program will have exhausted hydro developments available to the company, apart from the Fraser and Columbia rivers.

"Ordinarily," he said, "we would have had under construction by now one of the larger hydro sites on the Fraser or Upper Columbia to come on our lines by 1963.

"However, the Fraser, through salmon, and the Columbia, through being an international river, cannot be developed without governmental sanction."

In switching from hydro to steam, B. C. Electric is altering dramatically the whole power picture in the province.

The company already has under construction a 100,000 kw. (about 134,000 hp.) gas turbine generating plant at Port Mann, B.C.

This is an $11.5 million project due for completion next year.

But the new thermal plant likely to be built near the refinery town of Ioco, 10 miles east of Vancouver, will have a capacity of 1.25 million hp. and cost, at current estimates, something in excess of $100 million.

Not Decided

It has not been definitely decided yet if the new plant will be powered by natural gas, coal or oil. But it is probable that Peace River gas will be chosen, with a switch-over to atomic fuel as soon as it becomes economic.

By 1975 B. C. Electric is likely to be producing about half the 12.5 million hp. needed by the province. Compare this with the 30% today of B. C.'s installed capacity of 2,370,000 hp.

The other major producers are **Consolidated Mining and Smelting Co.**, 26% (630,000 hp.), **Aluminum Co. of Canada**, 17% (420,000 hp.) and B. C. Power Commission, 10.6% (252,000 hp.).

The total hydro potential of B. C. has been estimated by the government's water rights branch at a little less than 23 million hp. The main sources of power apart from the Columbia and the Fraser are these:

- Northern B. C. has a potential of nearly five million hp. by developing Atlin Lake and the Yukon and Taku rivers. The flow of the Yukon would be reversed.

But once again downstream benefits in U. S. territory produce an international problem of sufficient magnitude to deter development.

- In the Nechako - Kemano area, where Alcan obtains power, the ultimate potential is estimated at 2.2 million hp.
- The Nass and Skeena river systems have a combined potential of 500,000 hp. The Peace River might yield 179,000 hp.
- The Childo Lake-Homathko River system, 200 miles northwest of Vancouver, has an 800,000 hp. potential.

The Seaway Project

Power Will Flow in 1958

St. Lawrence Seaway power is due to flow next year.

For Ontario, this means a transfusion of much-needed energy for fast growing industry.

Construction of the big power development is more than two-thirds complete.

Soon much of the International Rapids section of the St. Lawrence River will become a headpond 25 miles long for the 2.2 million hp. project.

Full potential is expected to be realized in 1960.

Development is being carried out jointly by Ontario Hydro and New York State Power Authority. Estimated cost in 1954 was $600 million, to be evenly divided between the two.

Ontario Hydro sticks to its cost estimate, says:

"It may be that our 1954 estimates and calculations were more precise than were those of the men who worked on calculations of costs of the navigation phase (for which cost estimates have had to be revised upward). We've been working on this for years, with models."

Two powerhouses and two dams are needed to harness the river.

- Adjoining powerhouses will stand one on either side of the international border, spanning the channel between the eastern shore of Barnhart Island and the Canadian shore.

Each will turn out about 1.1 million hp. from 16 generating units. They will act as gravity dams.

- The second downstream dam will be the Longue Sault structure. It will block the southern channel between Barnhart and the U.S. mainland.

Create Headpond

Longue Sault Dam will create the headpond and will let excess flow bypass the powerhouses.

- The Iroquois Dam will stretch from Iroquois Point in Canada to Point Rockway in the U.S. and control outflow from Lake Ontario.

Add to the dams and powerhouses: About 3.5 miles of dyking on the Canadian shore north and west of the powerhouses.

These dykes will be flat-topped with sloping sides, will help contain the headpond.

They require 4.9 million cu. yds. of earth and 330,000 cu. yds. of stone.

The four basic power structures will need 2.7 million cu. yds. of concrete and 20,600 tons of structural steel.

When complete, the powerhouses will be operated jointly, with maintenance and operating costs to be split evenly.

Basically the big project utilizes a 92-ft. drop over a 125-mile stretch of river between Lake Ontario and the Cornwall, Ont., area.

Here's how the job has progressed:

It began in August, 1954, with international ceremonies at Cornwall and Massena, N.Y.

Early construction centred on powerhouses.

Two cofferdams were built to dewater the powerhouse site, the first stretching 500 ft. across the north channel of the St. Lawrence from Sheek Island on the Canadian side to Barnhart on the U.S. side; the second spanning the north channel from the Canadian mainland to Barnhart Island.

The second year, 1955, was devoted almost entirely to excavation and allied work.

Last year, the project began to take shape.

By the end of 1956, 405,000 cu. yds. of concrete had been placed; it's expected that, by the end of this year, an additional 500,000 will be laid. This is 90% of the concrete work.

Some 71% of the powerhouse installation is scheduled for completion this year. This involves installation of four turbines and work on a fifth.

Preliminary work is also slated on two generators.

Both Longue Sault and Iroquois dams are being built in two sections; the cofferdams dewater half the river bed, construction is completed, then a new set of cofferdams are built and the process repeated.

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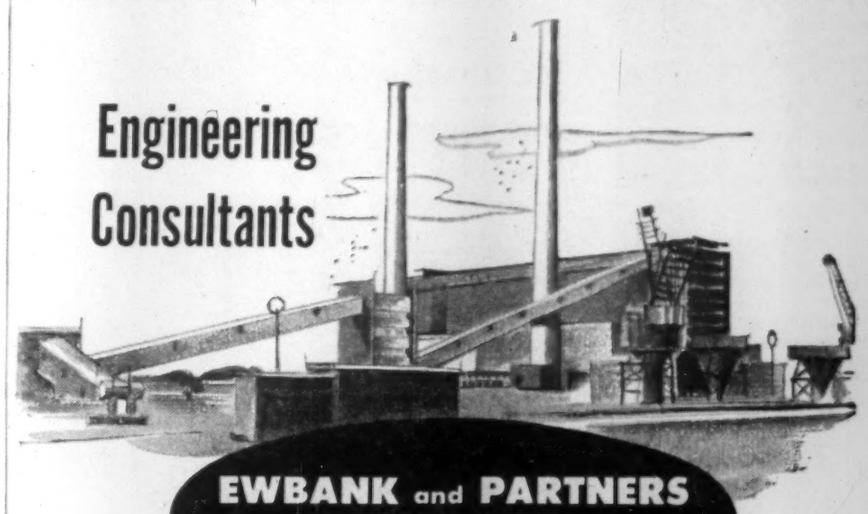

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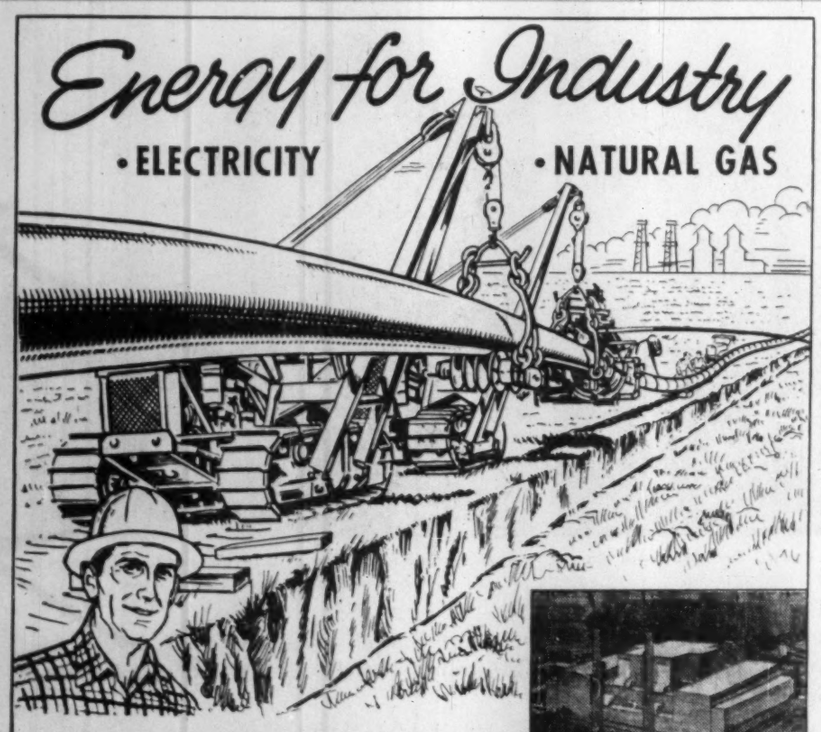
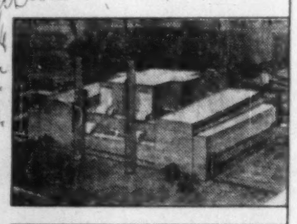
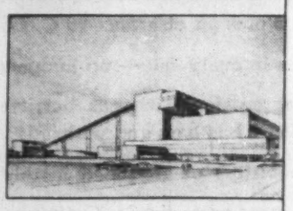






Two new $40,000,000 power stations, presently under construction, will play a vital role in supplying low-cost electrical energy. Top, South Saskatchewan River Generating Station, Saskatoon. Bottom, Boundary Dam Generating Station, Estevan.

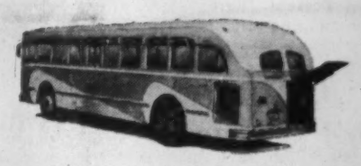
BUILDING A GREATER, MORE BALANCED ECONOMY FOR SASKATCHEWAN

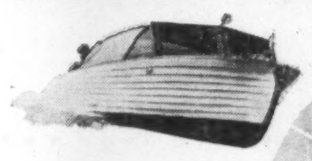
The Saskatchewan Power Corporation is proud of the large part it is playing in helping to bring industry to Saskatchewan. In assuring more than adequate supplies of electrical power and natural gas for present industrial needs and building for future demands, the Corporation is laying a cornerstone for a more diversified economy based on agriculture, oil, mining and manufacturing.

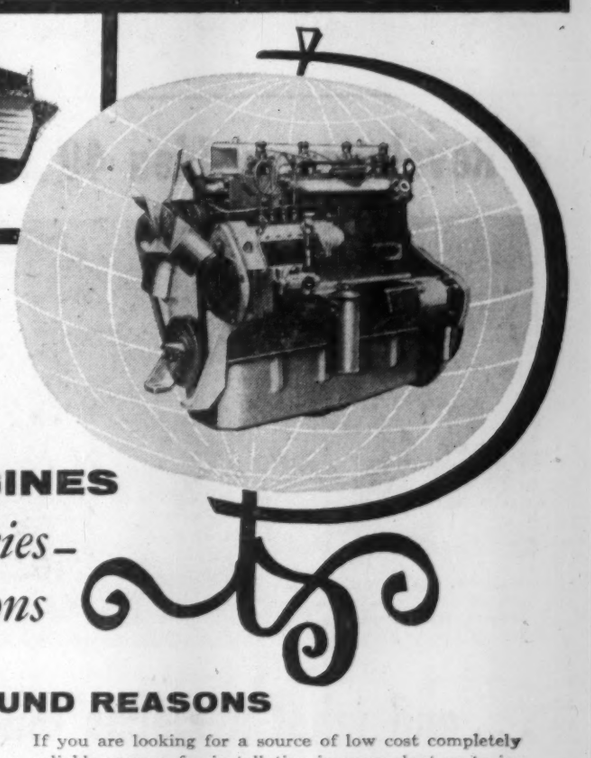
Saskatchewan offers definite advantages to encourage manufacturing. New industries will undoubtedly follow the lead of those already successfully established and concentrate on becoming a part of Saskatchewan's new era of development.

DAY OR NIGHT ALL HOURS FOR PUBLIC SERVICE
Saskatchewan POWER CORPORATION

The famous Cockshutt 40PD Diesel Tractor, powered by a Perkins L-4 Engine. The engine is rated at 52 BHP at 1650 rpm.


By installing Perkins Diesel Engines in their passenger coaches many Canadian Bus Lines have reduced their fuel costs by as much as 50%.


Perkins Marine Diesel Engines mean lower operating costs, reduced risk of fire and greatly increased operational range. The Grew "Admiral" shown here is fitted with a Perkins P6 (M).



Versatility plus: The Perkins L-4 offers a choice of 22 different flywheel and housing combinations. Also a vast assortment of engine support brackets, radiators, etc. The buyer can very nearly write his own specifications.

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Dependability—On a recent drilling job in Canada a Perkins P6 Diesel Engine was kept in operation for 19 months at one stretch. It worked altogether 12,000 hours and supplied the power for 20,000 feet of drilling. At the end of that time the P6 was still in such good condition, it could have continued working for another 6 months—without overhaul. This was no isolated instance. Stories of similar performance come in from all over the world.

Economy—The low purchase price and very low operating costs of Perkins Diesel Engines make them the most economical power source available anywhere—whether they're used for tractors, combine harvesters, vehicles, boats, generating equipment, or for a host of other purposes. If you make a comparison, on output alone, you'll find that many Perkins Diesels are the lowest priced engines in their class—in the world.

Adaptability—Perkins manufacture industrial, agricultural, vehicle and marine type Diesel engines from 18 HP at 1,000 rpm, to 108 HP at 2700 rpm. In 138 different countries these engines have been adapted to more than 300 different power applications. The Perkins L-4, for example has such a wide range of optional accessories that the buyer can practically design his own engine—at no extra cost.

If you are looking for a source of low cost completely reliable power—for installation in your plant or to incorporate in any of the products or equipment you manufacture, it will pay you to investigate Perkins Diesels. They are backed with a world wide performance record—and by sales and service facilities right across Canada.

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Electrical Manufacturers

May Up '57 Output to New Peak

NIAGARA Falls (Staff): This year Canada's electrical manufacturing industry is likely to hike its production to a new peak.

Despite the close tie between the production of electrical equipment and the building of new houses, there is every sign that last year's production total of $1.2 billion will be exceeded in 1957.

That was the item of bright news that greeted the more than 500 executives who attended the 13th annual meeting of the Canadian Electrical Manufacturers Association here last week.

The news came from CEMAs' newly-elected president, Thomas J. Bell, president of Fiberglas Canada Ltd., Toronto.

Reporting that the industry's domestic production in 1956 had risen 11% on 1955, he said:

"This is the second consecutive year that the electrical manufacturing industry has passed the billion dollar mark in production and barring some unforeseen problem, the industry should maintain this strong economic position in the years to come."

He added: "To avoid any overly-optimistic connotation, however, I wish to point out that while this shows a marked improvement over the past two years, it is still far short of the peak 16.6% increase recorded for 1953."

The electrical manufacturing industry produced $1,094,100,000 worth of goods in 1955, $986,790,000 in 1954 and $973,600,000 in 1953.

The industry's 1956 production figure includes some $139,800,000 worth of washing machines, electric driers, porcelain insulators and other similar products, which are manufactured by the industry but classified by the Dominion Bureau of Statistics under other industries.

Present State

Commenting on the current position, Mr. Bell added that the electrical manufacturing industry is maintaining its position as one of Canada's largest industries in terms of numbers of employees and wages paid.

"In 1956," he said, "the industry employed 83,600 persons as against 76,200 in 1955, an increase of more than 9.5%. The industry's wage and salary bill for last year reached $315,000,000, an increase of 19% over the 1955 figure of $264,000,000.

"In addition," he reported, "the industry used $556,000,000 worth of raw materials in 1956, compared to $477,600,000 worth in 1955, thereby retaining its position as one of the major consumers of Canadian raw materials."

The industry spent an additional $9,025,000 for fuel and electricity last year, as against $7,800,000 in 1955.

Average profit of companies in the electrical manufacturing industry was reported to be 3.3% for 1956. This figure was given by B. Napier Simpson, general manager of CEMA.

Speaking to industry leaders at the annual meeting, Mr. Simpson said that this was an increase on the industry's profit margin in 1954 and 1955 but it was still among the lowest profit margins in the industry's history.

"It should be compared with an over-all average profit of 5.8% for all manufacturing industry in Canada during 1956, according to the survey made by the Canadian Manufacturers Association," he said.

The electrical manufacturing industry reported profits on the sales dollar of 2.9% in 1955, 2.6% in 1954, 4% in 1953 and 4.1% in 1952.

Said Mr. Simpson: "CEMA's annual survey of electrical manufacturing companies shows that only 0.8% of the average profit margin was paid out in dividends.

Exactly Same

"This is exactly the same as that for 1955 and represents the lowest average payment in the industry's history.

"The remaining 2.5% of the profit margin was re-invested in business to cover plant and equipment expansion, modernization and replacement costs. Depreciation during the year averaged 1.7%.

"It is obvious that the small amount left for expansion and modernization, is hardly adequate to meet the growth needs of one of Canada's major industrial units. It is part of the cost we must pay in order to meet the yardstick of price set by imports from nations whose wage rates in some cases are not more than one-third of ours."

He also announced that: "Wages, salaries and employee benefits accounted for 26.4% of the electrical manufacturing industry's sales dollar in 1956, compared to an average of 21.8% for all Canada."

CEMA's three-day meeting included some 45 meetings of divisions, committees, sections and technical committees of the association.

W. Frank Wansbrough, chairman of the Major Appliance division, gave news of a sales survey that showed Canadians were buying more major electrical appliances per household than in any other country in the world.

He said that Canadian sales of electrical appliances are continuing at a high per capita rate compared to other nation, but the current decline in residential construction has caused a leveling off compared with 1956.

"Despite aggressive sales efforts on the part of Canadian manufacturers which have resulted in some prices being lower than five years ago, imports are continuing to make inroads into Canadian domestic sales," he reported.

"Imports of U. S. refrigerators and freezers during 1956 were equivalent to around 55% of those shipped by Canadian manufacturers, and absorbed more than 25% of total sales.

"These imports have the effect of reducing Canadian production and employment in an industry which needs both to survive.

"Actual figures show that Canadian refrigerator and freezer manufacturers shipped 283,000 units in 1956 as against 284,600 units in 1955, representing a small decline. On the other hand, imports of refrigerators and freezers into Canada in 1956 reached a total of 156,000 units compared to around 152,000 units in 1955, an increase of nearly three per cent."

The chairman of CEMA's Rural Electrification Committee, F. C. Carter, reported that the sale of electrical appliances was now as good, per capita, in rural areas as in cities.

"Contrary to prevalent opinion, rural families are in the forefront when it comes to taking advantage of household electrical appliances. For instance, a rural survey shows that 7% of farm homes have electric dishwashers, while the average for urban homes is only 4%," he said.

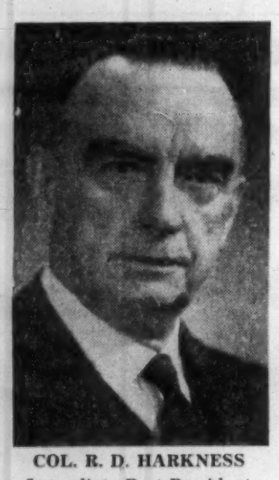
How Electrical Manufacturing Grows

	1956	1955	1954	1953
Gross Prod.	$1,215,800,000	$1,094,100,000	$986,800,000	$976,000,000
Wages, Salaries	$315,000,000	264,000,000	$258,000,000	$250,000,000
No. of Employees	83,600	76,244	75,075	76,856
No. of Companies	471	468	457	422
Materials Used	$556,000,000	$477,000,000	$396,000,000	$383,000,000
Av. Profit on Sales Dollar	3.3%	2.9%	2.6%	4.0%

Source: DBS & CEMA estimates.

CEMA Chiefs

B. N. SIMPSON
General Manager



COL. R. D. HARKNESS
Immediate Past President

Executives of the electrical manufacturing industry elected as directors of CEMA at the annual meeting were:

R. J. M. Allan, executive vice-president, **Addison Industries Ltd.**

R. E. Bailey, vice-president and managing director, **Thomas & Betts Ltd.**

B. W. Ball, president, **Cemco Electrical Manufacturing Co.**

H. L. Burrow, president, **Sangamo Co.**

W. C. Cannon, president, **Frigidaire Products of Canada Ltd.**

H. C. Darroch, president, **Moffats Ltd.**

L. H. Duncan, vice-president and general manager, **Silex Co. Ltd.**

W. H. Evans, president, **Honeywell Controls Ltd.**

W. J. Gilson, president, **Eastern Power Devices Ltd.**

C. R. Hughes, president, **Automatic Electric (Canada) Ltd.**

J. W. Kerr, vice-president and general manager, **Triangle Conduit & Cable (Canada) Ltd.**

V. N. Longtin, president, **Iberville Fittings Ltd.**

L. G. Lumbers, vice-president and general manager, **Canada Wire & Cable Co.**

Richard Noonan, general manager, **Pioneer Electric Ltd.**

W. G. Robson, president, **Otis Elevator Co.**

John Sinclair, executive vice-president, **Kelvinator of Canada Ltd.**

J. H. Smith, president, **Canadian General Electric Co. Ltd.**

H. B. Style, president, **John Inglis Co.** and **English Electric Co.**

W. I. Turner, president and general manager, **Canadian Controllers Ltd.**

M. N. Vuchnich, president, **Lincoln Electric Co. of Canada.**

S. C. Watson, vice-president and general sales manager, **N. Slater Co. Ltd.**

G. L. Wilcox, president, **Canadian Westinghouse Co.**

H. L. Wright, president, **Curtis Lighting of Canada Ltd.**

Atom Fuel Rod Plant Plans Ahead

By the time Canada has atomic power stations of her own there should be ample supplies of fabricated fuel elements available from Canadian factories.

With the opening of a fuel rod manufacturing plant at Port Hope by **AMF Atomics (Canada) Ltd.** at the beginning of the month the fourth essential link in the chain was completed.

The other links are, of course, the mining of uranium ore, processing of the mineral and reduction to metal.

Eldorado Mining and Refining Ltd., also at Port Hope, is expanding its existing facilities to carry its normal refining process through to the natural uranium state.

There is every possibility that in many cases there will be no need for this reduction process. Fuel elements have in many cases been shown to stand up to irradiation and "heat shock" better in oxide form.

Oxide-cored fuel elements are planned for NPD, Canada's first atomic power station.

Call For Metal

Nevertheless, there is no doubt that there will also be a call for uranium metal.

It may even happen that there will be a further requirement for enriched forms. These would have a higher percentage of the active uranium 235 isotope than the 0.07% that is normal.

Present Canadian policy and scientific opinion is against the use of this fuel, which is expensive, on the grounds that this extra cost is unwarranted.

The development of the fuel rod factory at New Hope has been heralded as a "major step" in the development of atomic energy operations in Canada.

The plant is also claimed to be Canada's first "privately owned and operated plant and laboratory organized solely for nuclear research, development, engineering and manufacturing."

The initial unit, which is expected to develop into a large nuclear facility, covers 36,000 sq. ft.

It is located on a 30-acre site, so that there are substantial reserves of space.

The parent firm, the **American Machine & Foundry Co.**, which completely owns AMF Atomics (Canada) Ltd., hopes to expand to the point where it is able to cope with all Canada's future needs and also those of the parent company in U. S.

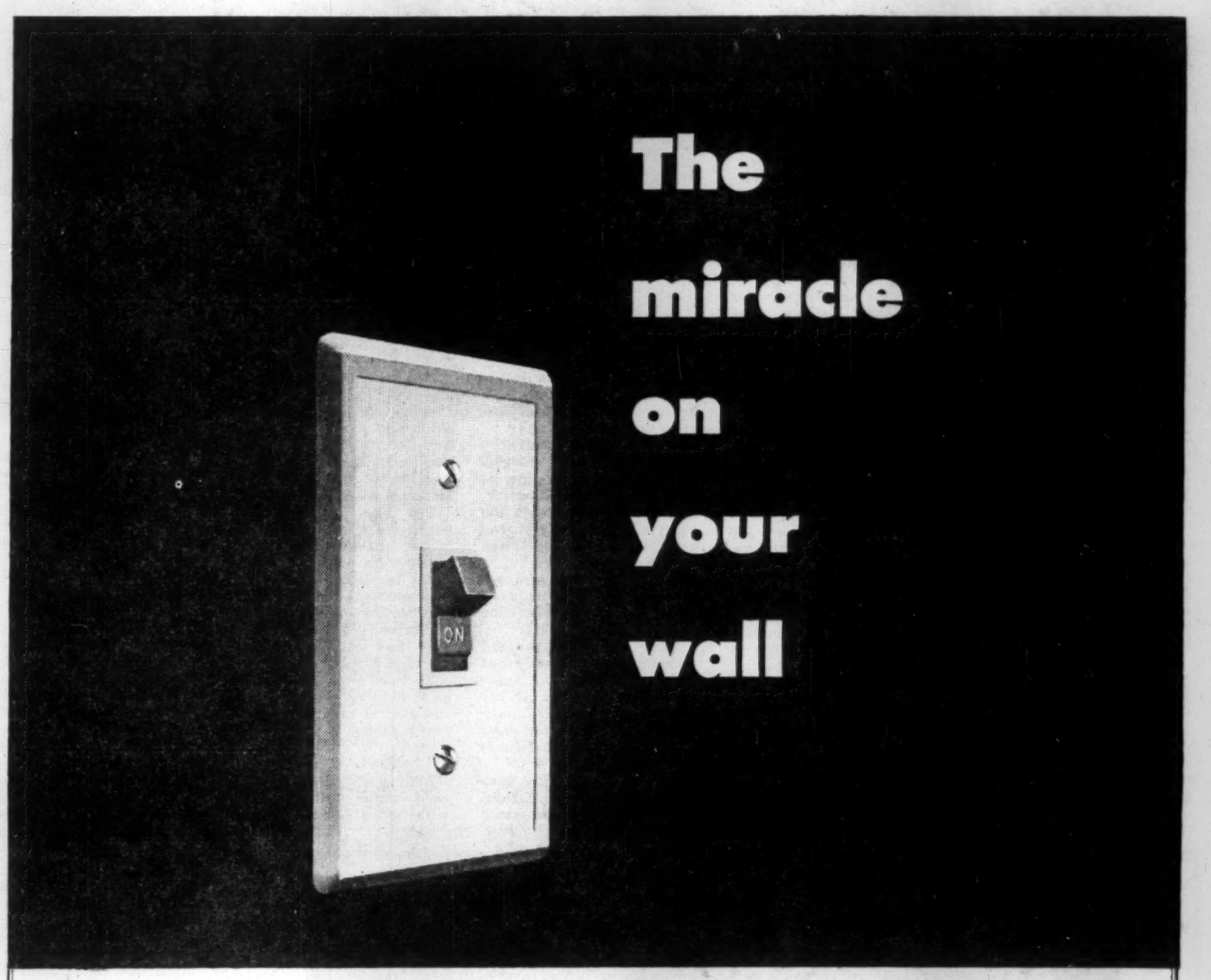
Associated companies or owned subsidiaries of AMF are hoping for big orders from Euratom countries and also from Japan. These would be satisfied by the Canadian factory, using Canadian raw materials.

Some 125 Canadian and U. S. industrialists, civic leaders, and Canadian atomic energy officials gathered for a reception and dinner at the King Edward Hotel in Toronto last week to mark the opening of the new plant.

Among those present were William J. Bennett, president of **Atomic Energy of Canada Ltd.** and **Eldorado Mining & Refining Ltd.**; James S. Duncan, chairman of Hydro Electric Power Commission of Ontario; Morehead Patterson, chairman and president of American Machine & Foundry Co.; and General Walter Bedell Smith, vice-chairman of AMF and chairman and president of AMF Atomics (Canada) Limited.

Toronto Industrial Leaseholds Co. Ltd., who built the new plant, were also celebrating the completion of the

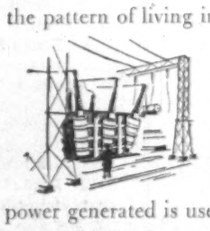
(Continued on page 63)



Behind the familiar wall switch lies the far-sighted planning and ingenuity of Canada's electrical industry that provides the low-cost power and efficient equipment which is helping to raise our standard of living.

When you want light in a room, you just flick a switch. It's as simple as that. And, if that minor miracle is taken for granted, consider a few of the other tasks electricity performs in the home.

It cooks complete meals while you are out—takes the labour out of cleaning, polishing, washing and ironing—keeps perishable foods in perfect condition, for months if necessary—supplies constant hot water—brings you radio and television entertainment—and helps to keep your home cosily warm in winter and delightfully cool in summer. This is fast becoming the pattern of living in even remote Canadian homes today.



While the role played by electricity in the home naturally looms large with all of us, it should always be remembered that by far the larger part of the power generated is used by industry. In fact, it is primarily because of the availability of this dependable source of power that Canada has been able to develop her aluminum, pulp and paper, mining and manufacturing industries to their present position—which, indirectly, adds to the prosperity of all Canadians.

When you flip that familiar switch on the wall, have you ever given a thought to the amazingly intricate system of power equipment that lies behind it?

From the start, the story of Canada's electric utilities has been one of phenomenal increases in demand for power being constantly met, with the result that Canada has become one of the most highly electrified nations in the world. And, as always with this enlightened industry, tomorrow's needs are being taken care of by today's planning.

This Company engineers, manufactures and supplies a complete line of electrical equipment including generators, transformers, switchgear, wire and cable for the generation, transmission and distribution of electric power—as well as the motors and control, electronic devices, appliances, lamps and other products that put it to work.

We, of Canadian General Electric, take pride in the fact that electric power has become the pulse of the Canadian way of life because—as Canada's oldest and largest electrical manufacturer—we have helped to make it so.

Progress Is Our Most Important Product

CANADIAN GENERAL ELECTRIC COMPANY
LIMITED

Power in the Maritimes

The Maritimes have dreams and plans to increase installed power capacity to meet the needs of growing industrial and domestic demand.

But the provinces also have numerous problems.

While the water power resources of New Brunswick are fairly substantial, they are not susceptible to low cost development.

The water resources of N. S. are limited and have been developed to considerable extent.

Prince Edward Island has little developed and apparently less prospect for major growth.

In terms of total Canadian installed capacity, the Maritime total is low.

At the end of 1956, the hydraulic installation amounted to less than 346,000 hp. in the three provinces compared with total Canadian capacity of about 18.3 million hp.

In New Brunswick with installed capacity of 164,130 hp., this means 288 hp. per 1,000 of population. While installed capacity in N. S. is higher than N. B. at 179,718 hp., its installation per 1,000 of population is lower at 258 hp. P.E.I. had installed capacity of only 1,882 hp. at the end of 1956, equivalent to 18 hp. per every 1,000 persons, the lowest in Canada.

The total Canadian installation per 1,000 of population amounted to 1,149 hp. based on population at June 1, 1956.

Of course, the Canadian average is second only to Norway among countries in the world, so that the Maritimes are in a more favorable position when taken in this light.

Valuable Source

The water powers of N. B. and N. S., although small in comparison with the resources of other provinces, are valuable as a source of power and considerable use is being made of them.

Both provinces have numerous rivers upon which moderate-sized power sites exist within an economic transmission distance of the chief cities and towns. Other sites are advantageously situated for the utilization of timber and mineral resources.

These provinces are also favored with abundant indigenous coal supplies. In P.E.I. there are no large streams and as a result water power sites are limited in size to those used for small mills.

But the Maritimes have an ace in the hole in possibility of harnessing the ebb and flow of tides in the Bay of Fundy. For decades now, this has been a dream. Currently, to determine with reasonable accuracy the cost involved, Canada and the U. S. — through the International Joint Commission — are conducting a $3 million study of the Quoddy project, as it is called.

Key questions include:

- Can it be built without destroying the Fundy sardine fishery at the entrance to Passamaquoddy Bay?
- Can it be built cheaply enough to provide cheap power?
- Are customers available for this power and if so would they contribute to the economy of the Maritimes.

The decisions on the project are important to Nova Scotia. While it will not receive power from Quoddy, there are hopes that it might harness Minas Basin, on the opposite side of the Bay of Fundy and produce some four million hp. The one thing apparently certain in respect to Minas Basin at this time is that if the Quoddy studies prove favorable renewed interest likely would follow in Minas Basin.

Based on estimated tidal flow of the Fundy, it has been suggested that the power potential theoretically available is over 209 million hp. It is doubtful if even a fraction of this could be developed but even at that the power potential is tremendous.

The major problem is still how this great potential can be harnessed at a per horsepower cost which is competitive with other means of producing electricity.

Even if economics merit the project, development is still undoubtedly a long way away. But the current study will go a long way toward answering the cost questions, and provide the basic material on which the cost of the tidal power generation versus other forms can be judged.

NEW BRUNSWICK Electric Power Commission's $30 million Beechwood hydro project nears completion. Crews are shown working on the installation of the generators for the power house (at right). The first 45,000 hp unit of the 135,000 hp development goes on line about mid-October, the second in November and the third next year.

Going Ahead

Even without this possible source of power, New Brunswick is going ahead with intensive construction to develop new power capacity.

N. B. has been somewhat late compared with the rest of Canada in developing its electrical facilities. However, it is considered to be in the midst of transition now and production of power is being expanded rapidly.

Both fuel and hydro resources are used in its borders with fuel having the larger installed capacity.

Basis for N. B.'s present power plan is an integrated system of thermo and hydro generation. One of the key spots in the province's power plants is the Beechwood plant of New Brunswick Electric Commission.

The first of the two generating units was scheduled to go into operation about mid-October and the second a month later. The design of the plant permits a further 45,000 hp unit.

Reasons for future optimism is that the commission may require a further 665,000 hp. to supply demand for electrical energy within the next decade even after the 135,000 hp. Beachwood station is on line.

The base metal mining companies already operating in the province have estimated their electrical power needs in the next 10 years may amount to 300,000 hp. There is also a suggestion that a substantial block of power may be required by the chemical industries.

To meet forecast demands, an orderly program for construction of needed generating facilities has been designed.

The plan is based on the installation of the large efficient thermo units integrated with hydro electric generation and the possible use of nuclear power.

Flexible Plan

The plan is flexible and may be adjusted whenever necessary in order to meet the power needs of the expanding economy.

N. B. Power Commission estimated in dollar terms that the new power plants, transmission lines, sub-stations and other equipment needed to distribute the additional energy by 1965 in the province may cost an estimated $200 million.

In its annual report, it pointed out that the load on its system in 1955-56 fiscal year reached and exceeded the 125,000 hp. mark and, according to normal growth trends, will reach 312,000 hp. by 1965.

In N. S., the **Nova Scotia Light and Power Co.** announced plans in December of last year to increase its generating capacity by 340,000 hp. in four stages over the following six years at a cost of $37 million.

First stage, a 60,000 hp. unit at the Water St. plant in Halifax estimated to cost about $7.5 million came on flow earlier this year. A second and similar unit will be installed by 1959.

In 1961, company plans to open a 100,000 hp. installation at Tuft's Cove near Dartmouth at an estimated cost of $10 million. This is to be followed in 1962 by a $12 million, 120,000 hp. installation also at Tuft's Cove.

Company states that the demand is more than doubling every seven years, and the load growth is in the vicinity of 11% per annum.

Largest Retailer

The company with its subsidiaries supplies electric service to about 50% of the consumers in the province and is the largest retail distributor of electricity in the Atlantic provinces.

Its generating stations have at present a total capacity of 160,270 hp. and a diesel plant of a subsidiary has a capacity of 2,890 hp.

Its steam plant at Halifax accounts for 109,250 hp. of this capacity, including a 33,512 hp. addition completed in 1955, and its hydro plants have a combined capacity of 50,885 hp.

More than 60% of the combined power requirements of the company and its subsidiaries is generated by the Halifax steam plant and over 30% of its hydro plants.

Considerable additions have been made in recent years not only to the generating but also transmission and distribution facilities to keep pace with the sustained growth demand.

The Nictaux Falls hydro development has been extended. McGill Lake Storage Dam has been completed which provides for an annual increase of 2.5 million kwh.

The Scragg Lake Dam means a further storage equivalent to 1.5 million kwh. The main control centre at Hell's Gate hydro plant was extended and now controls all the hydro plants in that area over FM Radio and telephone type equipment.

A new 69,000-v line from the Tuft's Cove substation supplies an additional 10,000 hp. for the oil refinery at Imperoyal. A 69,000-v transmission line from Burlington to Walton replaces 15 miles of 23,000-v line to supply the growing hp. load of the Magnet Cove Barium Corp.'s mine at Walton.

New Lines

New lines are being built from Truro and through Londonderry to Folly Lake to serve a rock-crushing operation in the company's northern division. The reliability of the 69,000-v grid system was further improved by installation of a high speed relay protective equipment.

Nova Scotia Power Commission has a total installed capacity at its generating plants of about 165,000 hp., divided between hydro, diesel and steam.

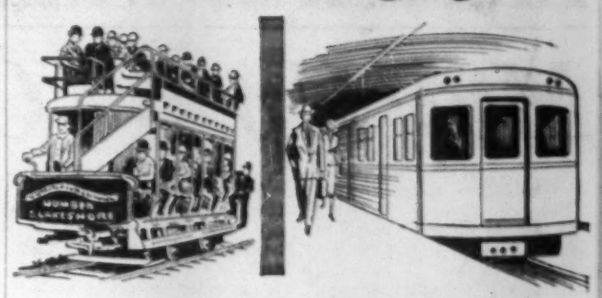
Commission has given approval for the installation of an additional 20,000 kw steam turbine generating unit in the Trenton Station.

It is expanding transmission line facilities designed to form part of the provincial grid.

Engineers and officials of the major electric power companies in both N. S. and N. B. along with an association with outside sources have been studying the possibility of intergration of the present power systems as well as likely future electricity requirements in the various areas.

The purchase of the **Canadian Electric Co.'s** 138,000-v transmission line between Maccan and Truro by Nova Scotia Power Commission this year was interpreted as a further move toward a province-wide grid system and a step toward an inter-provincial grid linking the two provinces.

Times are changing...



. . . and so is insurance. Today, the trend in commercial and domestic insurance is towards multi-peril package policies. These new policies, such as Pearl's Composite Dwelling, Composite Mercantile, Commercial Property Floaters and Commercial Building Forms offer a broader and more comprehensive coverage by combining various perils into one policy. With these new policies and Pearl's extensive line of established Inland Marine policies, Pearl provides versatile insurance protection for every need. Keep up to date, consult your Pearl Agent today for complete information on all multi-peril lines.

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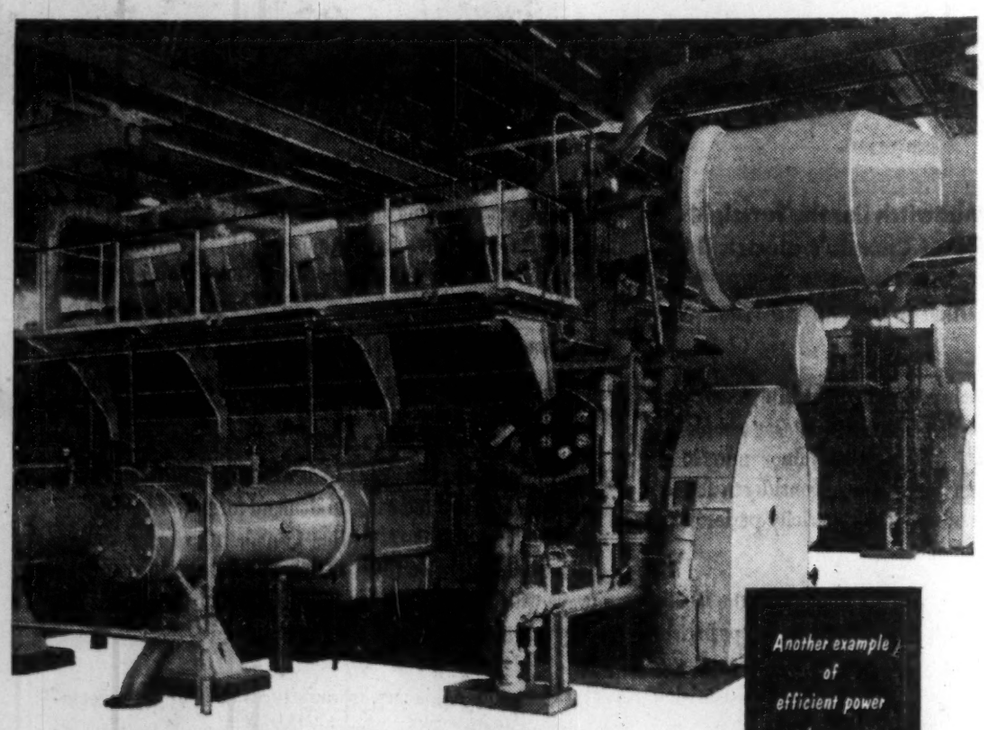

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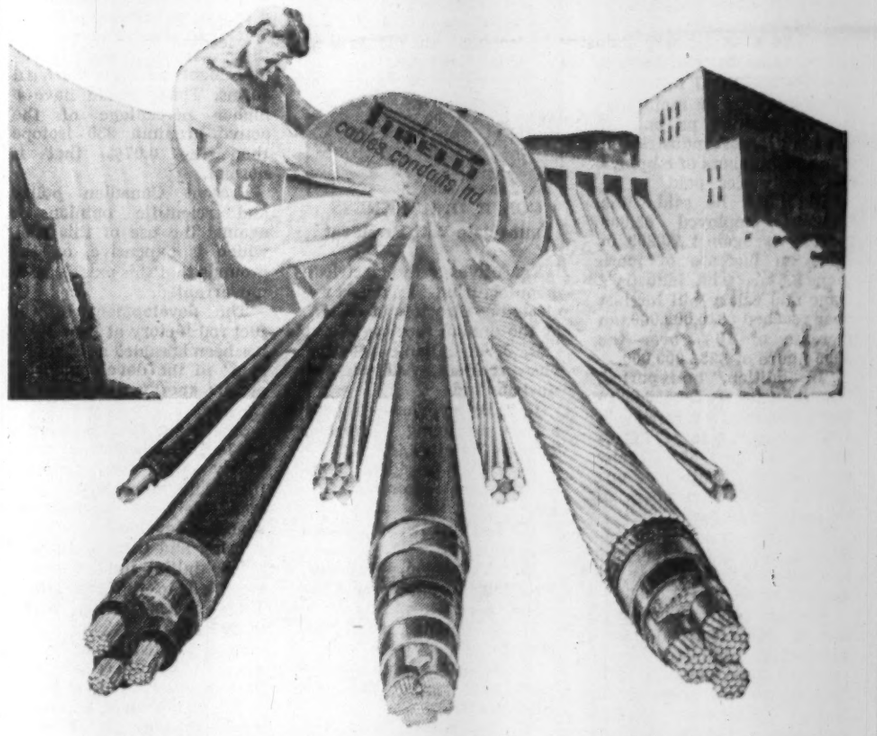

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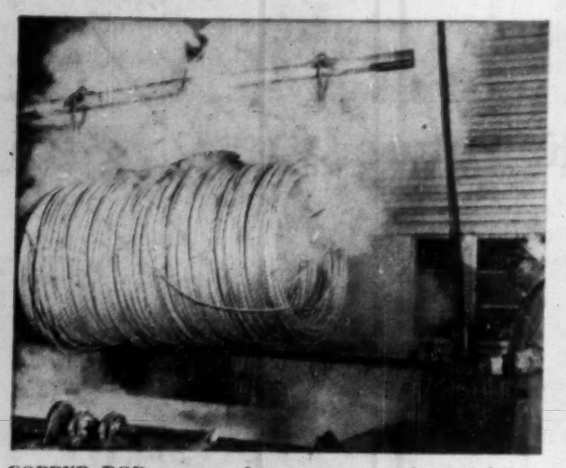
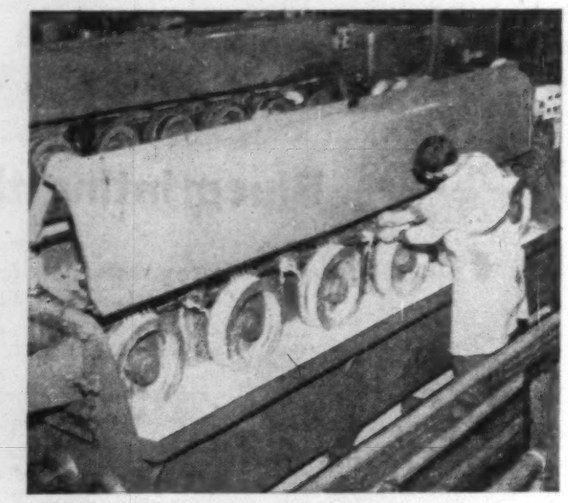
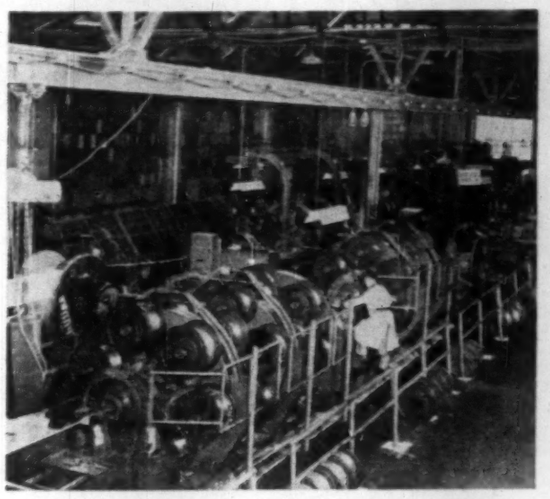


COPPER ROD emerges from a steam tank after being immersed in acid to remove the oxide scale.

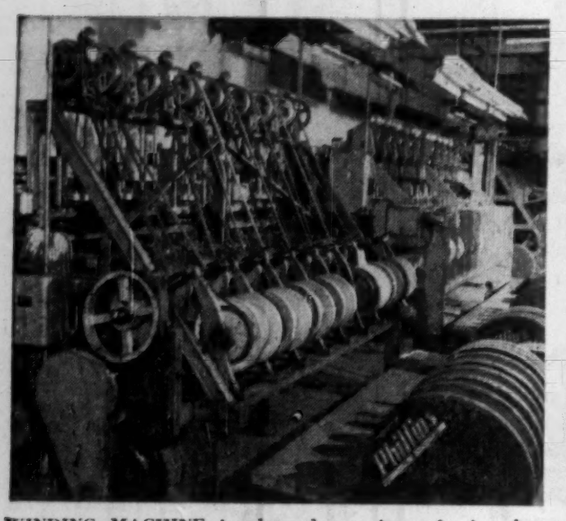


COPPER WIRE is drawn through a series of dies and gradually reduced in size. White substance is coolant.

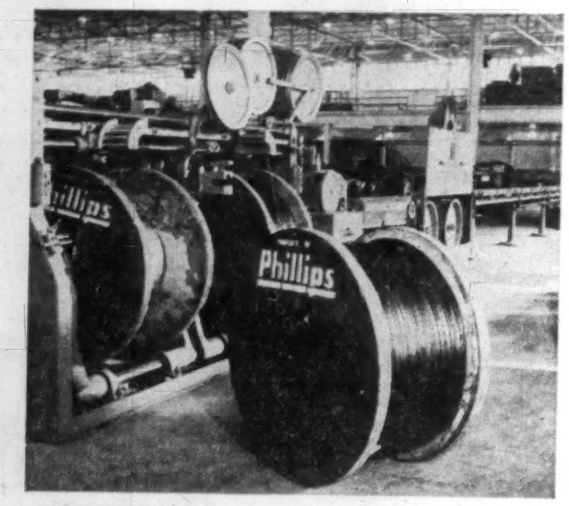


STRANDING MACHINE can make two separate cables at the same time. It also can strand 91 wires into one cable.

ENAMELLING MACHINE for magnet wires for electric motors and other electronic equipment. Enamel is baked on in layers.

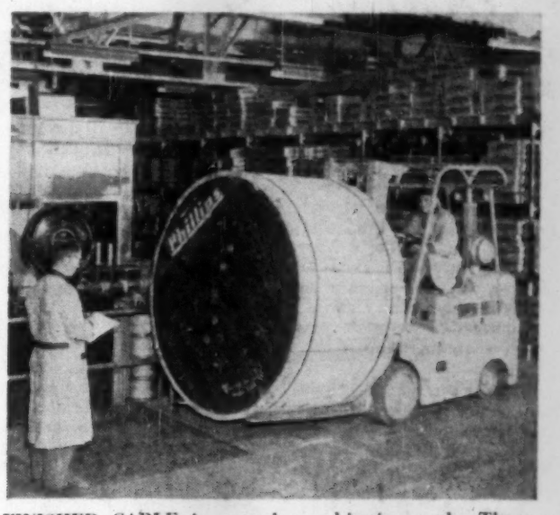


WINDING MACHINE insulates large sizes of wire, by wrapping them in paper, cotton or glass.



PLASTIC INSULATION makes possible use of bright colors for easier identification. Plastic is braided on the wire.

ASPHALT BATH protects cable against weather. After braiding the cable passes through the hot liquid asphalt.



FINISHED CABLE is wound on shipping reels. These "lagged" (boarded up) reels protect the cable during shipment.

Wires and Cables: Research Appetite

Wire and cable making is a feeder industry with a gigantic appetite for research.

It's the backbone of our electrical progress, a $185 million cornerstone for the transmission and harnessing of Canada's electrical economy.

As a semi-heavy industry vital to the well-being of all countries enjoying any degree of industrial development, wire and cable making is, of necessity, a research conscious profession.

Traditionally, the world's cable fabricators publicize much of their design ingenuity and a substantial pool of technical knowledge is available to anyone.

One of the major contributing nations to the science is the vigorous Canadian industry.

Canada is very much in the forefront of the research race. "We're not content to be figurative hewers of wood and drawers of water," says a leading cable maker.

"Our problems and our conditions are so specialized," he adds, "we frequently must take the lead in research and design and the result is that Canada is an important contributor to the world's store of wire and cable lore."

In many aspects, of course, wire and cable making is a mass production industry and the Canadian makers are well aware that they must keep abreast or ahead of the world if they hope to survive against the producers of bigger volumes elsewhere.

Two Separates

The terms wire and cable cover a large variety of related or semi-related products yet essentially they are two separate activities, with somewhat separate historical backgrounds.

In recent times, however, they have become so intimately connected that they tend to form a combined industry.

Wire making is an ancient art, converted into an exact science at the beginnings of the electrical age when closest attention had to be paid to the physical and electrical properties, strength, ductility, and dimensional accuracy of the product.

The electrical age as we know it today was initiated following the discoveries of Michael Faraday (theory of electro-magnetic induction, 1831; magnetization of light, 1835; subsequent advances in electrolysis and vacuum tubes) and it gave a tremendous impetus to the wire and cable industry.

The whole principle of magnetic induction, on which the electrical industry so largely depends, implies a field of magnetism produced

(Continued on page 56)

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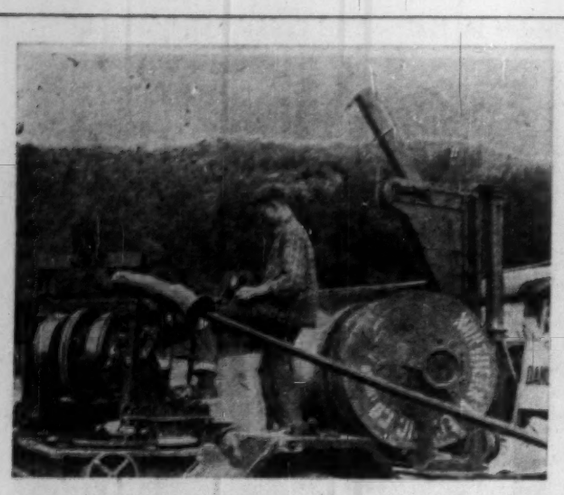

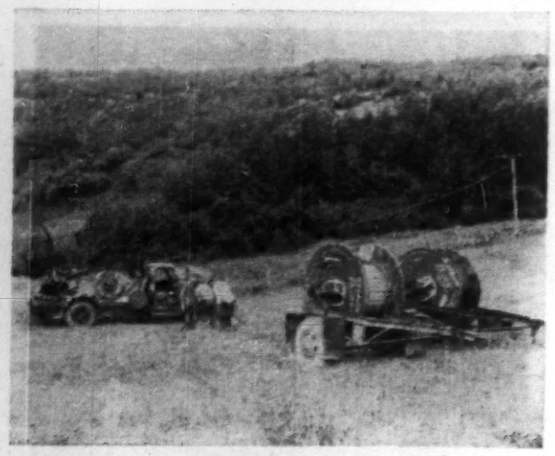

CABLE GOES ALOFT. Aerial installation of cables cuts time and cost. Messenger and spinner are mounted on a truck, while cable is fed from a reel on a trailer.

Wires and Cables

Huge Appetite for Research

(CONTINUED FROM P. 55)

by coils of wire in which electric current is flowing.

Until then, wire was almost entirely an iron product. From Faraday's time, however, strength alone no longer was the primary requirement for wire. Electrical conductivity became the chief characteristic demanded.

Copper was early recognized as the supreme inexpensive base metal having current carrying ability . . . and it soon became the wire making material of importance.

For nearly 100 years it retained its position unchallenged. Now, of course, the relative newcomer aluminum is finding rapid acceptance as an important wire making material.

Today with both copper and aluminum sharing the raw material spotlight, each of them is standard equipment in Canada's design labs.

Each of them has a specific place in the manufacture of both cable and wire, subtly different products.

In loose terms, almost any wire or cable whether bare or electrically insulated is frequently spoken of as "wire." In the industry, however, the term has a special meaning and a much more limited application.

It refers to a single strand of metallic material after subjection to certain manufacturing procedures.

By common understanding, wire is a metal piece formed into relatively great length and relatively small but uniform diameter through the process of cold drawing: pulling the metal lengthwise through a die or a series of dies to reduce its diameter, increase its length, and render it harder and stronger than before the cold drawing operation began.

Metallurgically, the difference between "wire" and the "rod" from which it is made can be readily detected by microscopic examination. The hot rolled rod will be granular in appearance whereas the cold drawn wire will have elongated granules that are oriented in the direction of the draw.

Cable, on the other hand, applies to an assembly of wires arranged in a prescribed geometric pattern for the purpose of taking advantage of the strength or the electrical conductance of the large and combined cross-section of metal without incurring the rigidity and stiffness which would result if the same amount of material was used in the solid bar or rod form.

The flexibility naturally implies a certain degree of movement between the individual wires of a cable when it is flexed or bent and this, in turn, calls for a great deal of care and accuracy in its design and manufacturing.

What complicates the operation is the diversity of insulating materials and techniques required to get the most economic use out of the end product.

The development of an extensive series of electrical insulating materials and methods for a rapidly expanding range of applications has added an entirely new dimension to the industry.

Now, the rubber, paper, petroleum and many sections of the chemical industries have been drawn into the cable makers' orbit.

Little Change

First, of course, the cable maker must begin with a satisfactory wire and the basic techniques for its production have changed little over the centuries.

The crude hand-windlass of early times has given place to machines of high speed and great power and accuracy.

Apart from refinements, however, the product still goes in one end of a harder-than-the-raw-material die and comes out the other side somewhat smaller and substantially longer.

There is a limit to the degree of reduction which may be made at each die, due to the danger of unduly hardening and breaking the material, and as it would be very uneconomical to pass the same wire through the machine over and over again, most modern drawing machines are equipped with seven or eight dies.

No material is removed in the operation and, therefore, with each succeeding increase in length correspondingly proportional increases in machine speed have to be designed.

Wire drawing in Canada differs little, if at all, from the drawing done in other countries. It is in the wire insulating and in the highly complex job of designing and building cables that the Canadian research engineer comes into his own.

Some of the notable current triumphs are the longest high voltage submarine cable ever laid (across the St. Lawrence River near Rimouski) and the all-aluminum 301 kv cable designed and built in Canada for **Alcan's** imaginative Kitimat-Kemano project.

The choice of available insulating materials is wide and varied. For wire there are seven basic coverings: textiles, paper, rubber and rubber-like materials, thermoplastics, thermo-setting materials other than rubbers, varnished cambric, and asbestos. Which to use and how to apply it poses definite research problems.

Textile materials, such as cotton, silk, glass fibre, rayon etc., usually are placed on the wire conductor by wrapping; the oleo-resinous enamels are applied by dipping and baking; the rubber compounds and thermoplastics usually are applied by hot extrusion; and the laying on of electrical insulation such as thin paper is a lapping operation.

When high voltages must be considered in the design specifications the importance of the insulating material assumes gigantic proportions.

As a feeder industry it is vital, yet as a consumer industry its role is equally important. Here's what it buys:

Copper — from Northern and Eastern Quebec, Northern Ontario, and Northern Manitoba. After electrolytic refining it has the highest rated electrical conductivity of any copper produced in the world.

Steel — comes from the mills of Sydney, N.S., Hamilton and Sault Ste. Marie, Ont., for use in steel cored aluminum cable and for steel armourings on some heavy duty cables.

Aluminum — from Arvida and Kitimat comes hot rolled rod aluminum and hot extruded tubing.

Textiles — from Canadian mills across the country special textile products such as wrapping for magnet wire, weaving for braided sheaths are carded and spun and prepared for their end destination.

Paper—for insulating and binding, paper is important to the wire industry. Both wood-pulp and manila-pulp are used.

The list is almost endless yet, apart from the manufacturing machinery itself, few of the industry's basic needs must be brought into the country from elsewhere.

Power transmission cable is also making giant strides.

As an indication of the industry's growth: in 1948 the industry produced some $85 million worth of wire and cable.

This year its production is estimated at $185 million. Not all of this increase represents additional physical output, of course.

Some raw material and labor cost increases have to be considered. Copper prices, for example, fluctuate to such an extent that dollar figures rarely give a complete story for the industry.

Actual physical volume of output, however, does, and the industry estimates that it has recorded a 50% physical increase during the past nine years.

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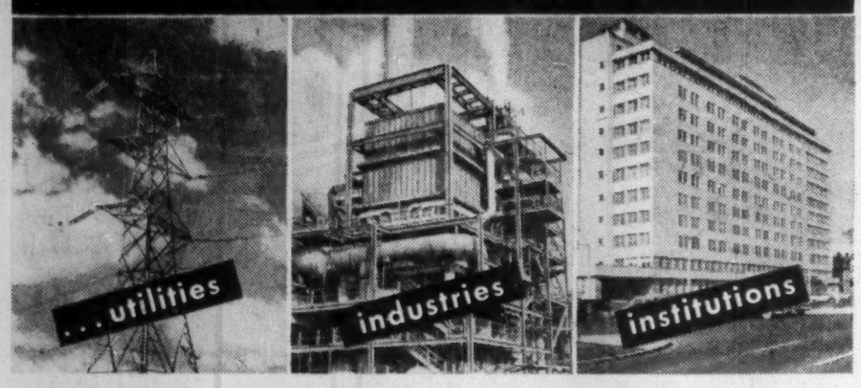

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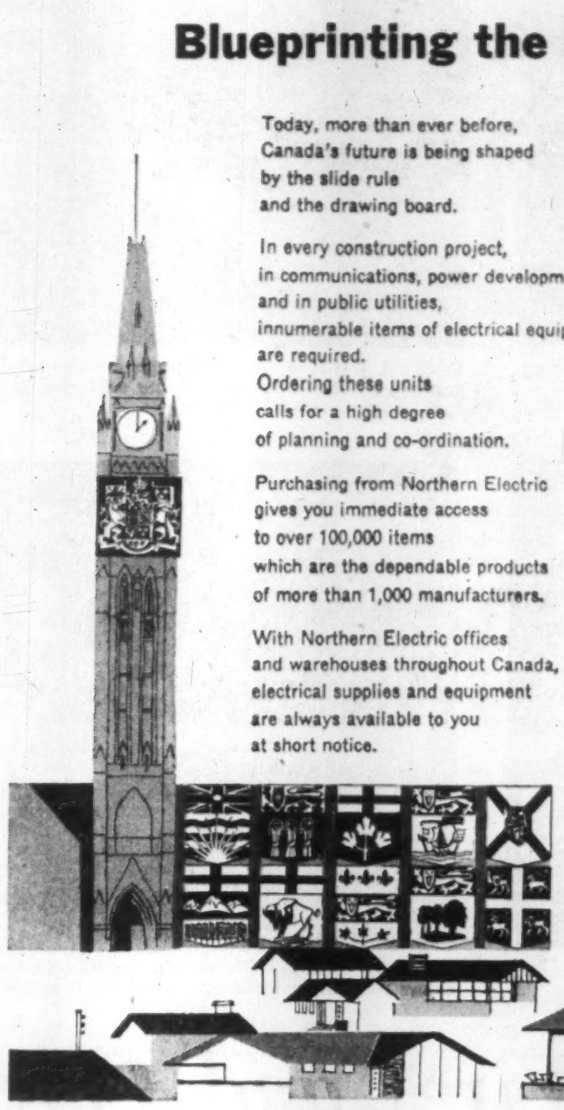

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Power in Ontario

Proud possessor of some of the world's lowest power rates, Ontario aims to keep cost down while undertaking tremendous expansion.

Here's how the future looks:

- First nuclear plant probably available in 1965.
- By 1981, probably 50% more power coming from nuclear plants than from hydro stations.
- Power demand to increase five-fold in the next quarter-century.
- Probable cost of meeting this increased need: $3,000 million. This will add close to 20 million new kw.
- Last major economic source of new hydro, St. Lawrence Seaway power scheme, will reach its 900,000 kw. potential in 1960.
- Two of the world's largest steam generating plants will be built by **Ontario Hydro** in the Toronto-Hamilton area. Cost: $500 million.

The two new steam plants will be the first of their kind to be built by Hydro in recent times though a $108 million expansion of the existing Hearn steam plant in Toronto to capacity of 1.2 million kw is now in hand.

Hydro is considering lakeshore sites at Long Branch and Burlington for the two new stations, both of which are expected to be completed by 1968.

Exhaustive checks on possible new sites for steam plants in Southern Ontario have been going forward for more than a year (**FP** Sept. 29, 1956).

Owns 40 Acres

Hydro presently owns about 40 acres in the Hamilton area but needs more for a new steam station of the 1.8 million kw capacity envisaged, and some months ago a feasibility study was made of land reclamation there.

The Long Branch property involved is known as the Rifle Ranges, has been owned by Department of National Defence.

The prospective site at Burlington is owned by the Hamilton Harbor Commission and consists of water lots in Burlington Bay which will be reclaimed by suction dredging, the necessary dockage facilities being provided by the retaining wall.

REMOTE POWER STATION in Northwestern Ontario will go into operation next spring. This is the Whitedog Falls development on the Winnipeg River, 30 miles north of Kenora.

The filled area will require some time to settle before a plant can be built on it.

The new Long Branch plant, representing a capital investment of $250 million, is expected to have an estimated capacity of 1.8 million kw with 300,000 kw turbo-generators. Tenders have already been called for two units.

Details of the Burlington plant have not yet been completed but it will likely be similar in size to the first one.

Hydro stated that the growth of power requirements in the adjoining areas and the engineering investigations at the two sites would determine the timing of the two developments.

About 150 acres are needed for a plant of the size proposed together with dockage facilities able to handle between four and five million tons of coal a year, it was pointed out.

Studies made of demand growth in Ontario and the resources needed to maintain a 7% reserve margin show this picture:

	Demand (million kw)	Supply (million kw)
1957 ...	4.2	4.5
1960 ...	5.4— 6.2	5.9— 6.7
1965 ...	7.5— 8.5	8.1— 9.2
1970 ...	10.2—11.6	10.9—12.5
1975 ...	14.0—16.0	15.2—17.2
1980 ...	19.3—21.3	20.7—23.6

Backgrounding the almost fantastic growth in power demand in Ontario is a super-fast industrial expansion.

The province is Canada's richest.

It has 33% of Canada's population; makes 50% of the manufactures; originates 35% of capital expenditure; has about 30% of farm income.

90% Supplies

Of all primary energy consumed in Canada, as reported by central electric stations, Ontario accounts for 37%. Ontario Hydro supplies more than 90% of total primary energy from central electric stations in the province.

In the decade following the last war, Hydro spent more than $1,000 million for expansion, bringing 14 new power sources into operation.

From 1945 to 1956 demand had grown from less than two million kw. to more than 4.2 million.

Hydro estimates total power resources by 1980 at around 23.6 million kw. Of this about 5.5 million will be from hydro-electric generating stations; 10.6 million from conventional fuel-electric; almost 7.5 million from nuclear-electric generating sources.

Here's how Hydro sees the picture in the intervening years:

By 1960 it estimates primary power requirements of between 5.4 million and 6.2 million kw with total resources of some 6.7 million kws.

These resources will comprise some 4.6 million kws of hydro-electric, 1.4 million of conventional fuel-electric, 608,000 of purchased power and 18,000 kws from the first experimental nuclear-electric station.

By the end of 1965, it's assumed, nuclear fuel-electric stations will be more economical for base load operation than conventional fuel-electric generation.

In that year, demand should hit between 7.5 million and 8.5 million kws with total resources of 9.2 million kws, of which 418,000 will be nuclear-electric, three million conventional fuel-electric, 5.1 million hydro-electric and the balance purchased by Hydro from other utilities.

The year 1970 shows primary power requirements at some 10.2 million to 11.6 million kws, with a dependable peak capacity of a little less than 12.5 million kws.

By this time total fuel-electric generation has overtaken the hydro-electric resources, which stand at 5.3 million kws compared with 4.2 million conventional and 2.6 million nuclear fuel-electric generation.

More Noticeable

By the end of 1975 the change becomes even more noticeable.

Conventional fuel-electric stations account for seven million kws, nuclear-electric for 4.5 million, hydro-electric a little less than 5.5 million.

The all-system demand is estimated at between 14 million and 16 million kws.

Hydro obviously has high hopes for atomic energy.

In the interim, before atom power becomes both available and economic, Hydro is expanding its coal-fired power capacity.

In a statement, Hydro Chairman James S. Duncan said of this situation:

"It is interesting to note that nuclear plants as designed at present, both here and abroad, must be operated continuously and at full capacity if they are to produce power economically.

"For this reason—and until yet untested advances in nuclear plant design have been made—it will be necessary to retain conventional generating plants to provide supplementary power to meet daily and seasonal fluctuations in requirements.

"Meanwhile it is fortunate that — undesirable as is the importation of coal — we are not, as in some countries, forced to rely on nuclear power during the early and costly stages of its development.

"Ontario Hydro is alive to the desirability of producing power through nuclear generation, using uranium mined in Ontario as soon as this can be done with safety and reasonable economy.

"Dependent upon the results of scientific and engineering progress in the intervening years, it is still hoped that the first nuclear plant will be available for base load operation in 1965; and that it will be within competitive range of coal-fired plants.

"The conventional plants which are built or planned will be required in our system even when nuclear power is available."

To meet the soaring power demand in mineral-rich northwestern Ontario — up almost 250% since 1945 — Hydro has begun work on a new thermal-electric generating station in the Fort William-Port Arthur area.

Initial cost: $26 million.

Scheduled for service in 1961, the plant will have initial capacity of 100,000 kw., with provision for enlargement to a million kw. as required.

The new plant will be in Fort William on Island No. 2, fronting on Lake Superior beside the Mission River, where excellent water and coal-storage facilities are available.

Hydro says a thermal-electric plant is essential in the Northwest to meet increasing power demands and to "back up" present resources.

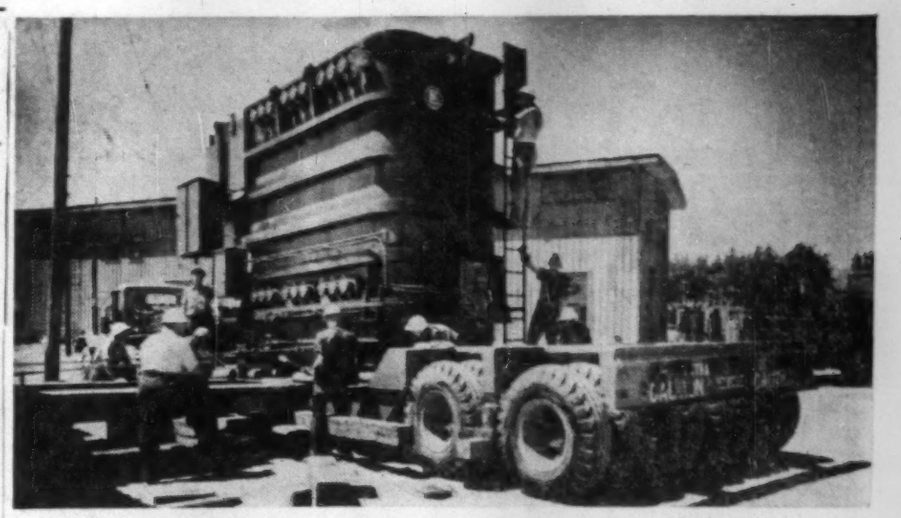
In an all-hydraulic system, continuity of power supply during low-water periods is of fundamental importance.

While there are a few hydraulic sites remaining in the area, these aren't adequate to meet heavy demand.

These remaining hydraulic sites will be developed later, as conditions warrant.

In 1945, some 5,000 kw. were used for the production of iron ore in Northwestern Ontario. Today a total of 70,000 kw. is needed for this purpose at the properties of **Steep Rock Iron Mines Ltd.** and **Caland Ore Ltd.** in the Atikokan area.

In base metals, two important new copper properties, **Geco Mines Ltd.** and **Willroy Mines Ltd.** in the Manitouwadge area are coming into production with a combined power requirement approaching 12,000 kw.



NEW GIANT KING SEMITRAILER
HELPS ONTARIO HYDRO MOVE 100 TON TRANSFORMERS

As Ontario has grown, so has Ontario Hydro, grown to meet the increasing demands for electricity. And as voltage demands have increased, the size and weight of new hydro transformers have increased to handle the tremendous loads.

This specially designed King semitrailer was built to meet a specific need of Ontario Hydro—to move new transformers weighing up to 100 tons from rail cars on which they are delivered to their permanent locations on Hydro property. Not meant for over-road hauling, the semitrailer often carries the transformer less than a hundred yards. Yet by using the New King low bed, the job is done in a relatively few hours—an operation that would take hundreds of manhours to accomplish by overland rolling and dragging methods.

Building special trailers for special jobs is a specialty of King. When you have to move heavy equipment of any type to any location, consult King engineers first. Their experience may be the means of saving you thousands of dollars.

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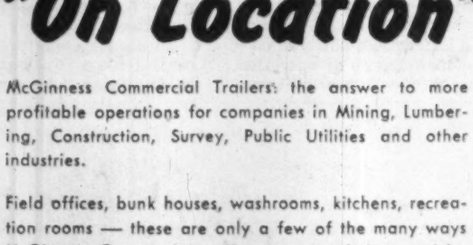

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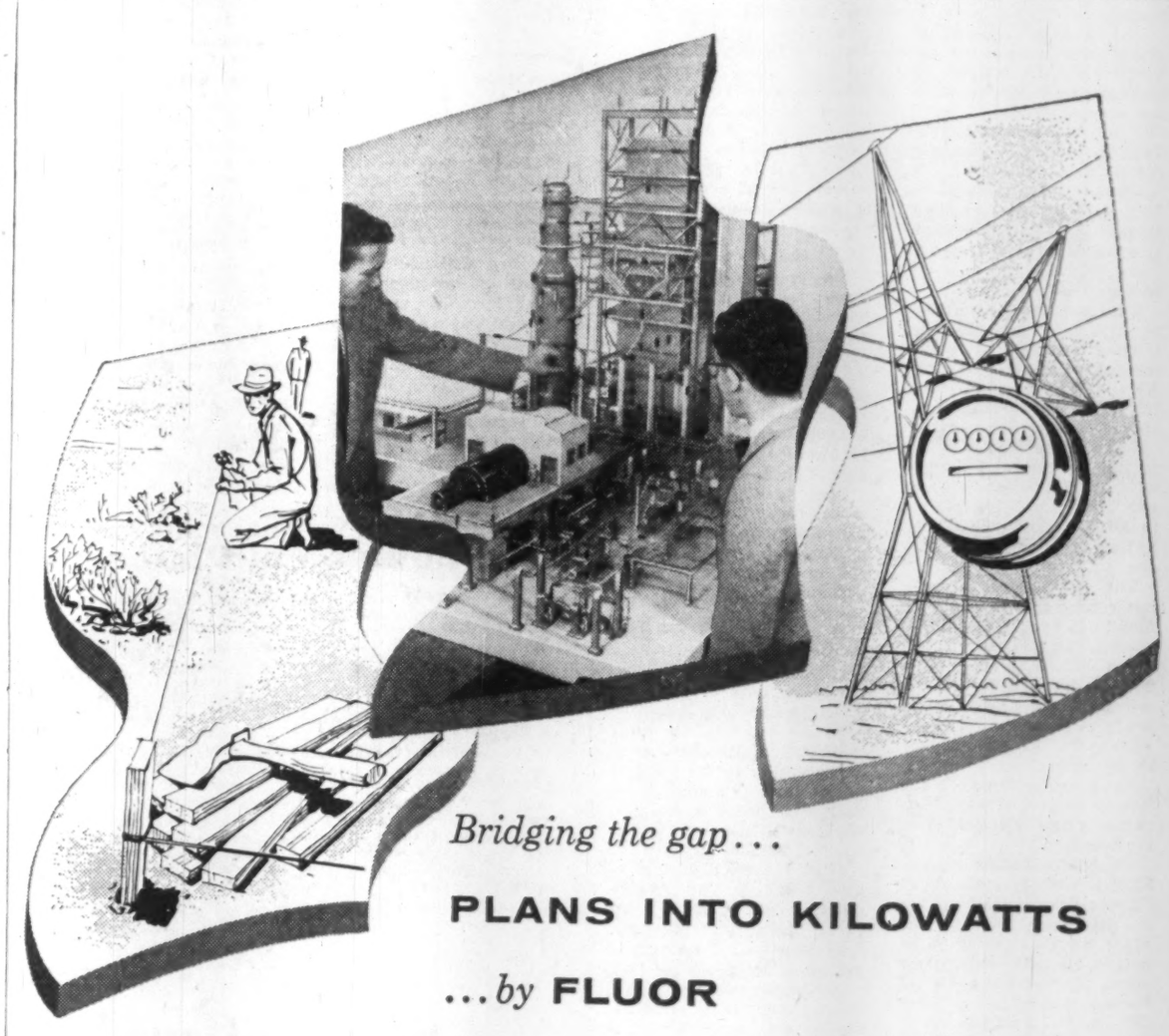

Bridging the gap...

PLANS INTO KILOWATTS

...*by* FLUOR

A study of Canada's growing economy shows why the electric power industry is building toward an estimated generating capacity of 320 million kilowatts within the next 40 years.

For these new facilities, the power industry has found that it can look to the Power Engineering Department of The Fluor Corporation, Ltd. for plants characterized by early completion, construction within estimates and consistently high efficiencies. At Fluor, one of the best balanced, experienced engineering and construction staffs available in industry today stands ready to design and build plants of any kilowatt rating and any basic design, from conventional steam turbine to nuclear reactor. Modern methods . . . symbolized by the detailed engineering model shown above (that of a steam-turbine unit) and the broad background of a permanent staff serving *many* industries . . . combine to prove that in electric power, too, "you can be *sure* with Fluor."

The organization and working methods of Fluor's Power Engineering Department are outlined in a newly released bulletin. Write for your copy.

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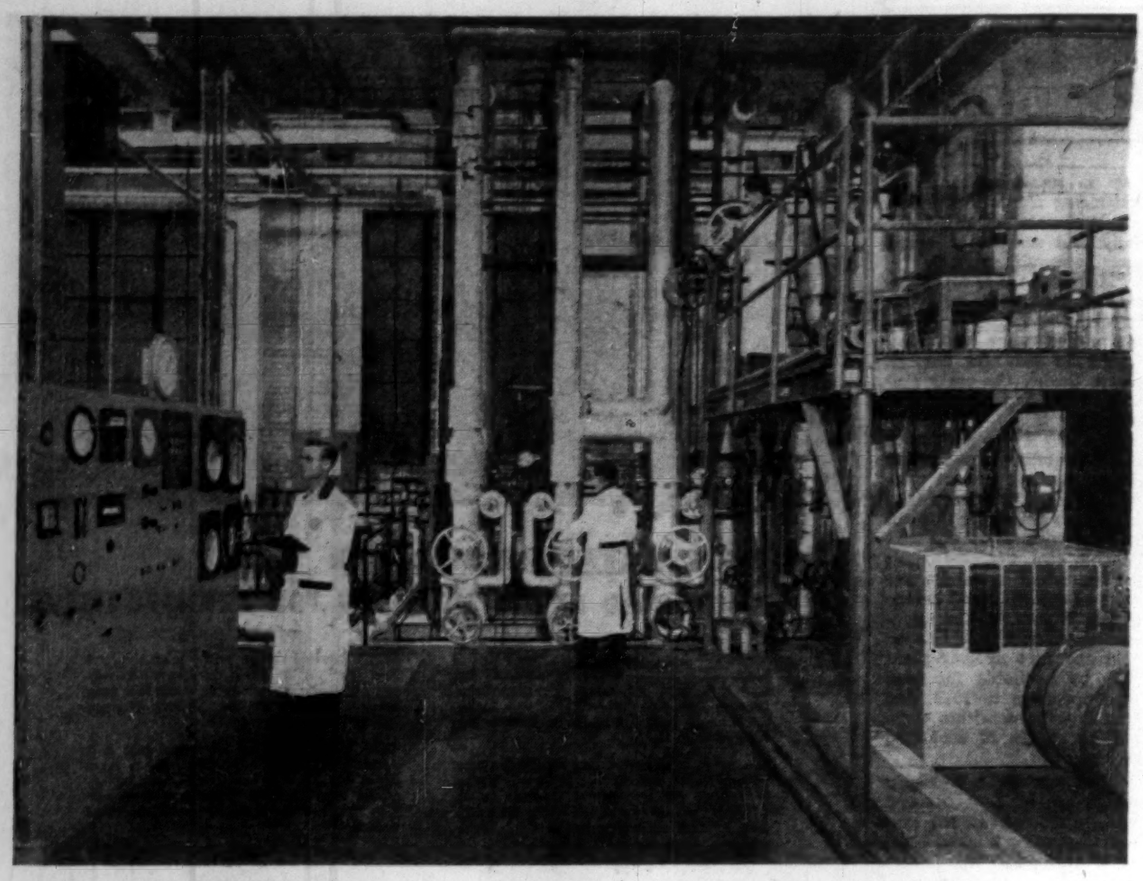


SIMULATORS are used in the civilian atomic power department of Canadian General Electric, Peterborough. This equipment tells researchers how heat transfer fluids will behave in future projects.

Power in Quebec

In the next four years, installed hydro electric capacity in the province of Quebec will jump by about 4.4 million hp.

That is more than 50% higher than present capacity of about 8,490,000 hp which represents more than 46% of total installed capacity in Canada.

The average annual increase will amount to approximately 1.1 million hp and compared with the average annual increase of 213,000 hp between 1945 and 1955. In 1956, rated capacity increased by 510,000 hp.

Behind this growth has been the needs of expanding industry and domestic users. Translated into per capita terms, Quebec is a world leader in power capacity.

The average installation per 1,000 of population in Canada is 1,149 hp which places Canada second only to Norway among countries of the world. Norway has an installed capacity of 1,500 hp.

But Quebec tops both the nation's average and Norway with 1,832 hp per 1,000 of population and is second only to British Columbia (1,859 hp) among provinces in Canada.

The reasons for Quebec's burgeoning growth are to be found in favorable topography, myriad lakes and rivers which occupy over 90% of the total area of the province, well distributed precipitation and vast reservoirs to trap the melted snow in the spring.

As a result, two of the largest power developments in the world are located in the province.

They are Quebec Hydro-Electric Commission's Beauharnois development on the St. Lawrence River which has a present capacity of 1.4 million hp and the Shipshaw plant of **Aluminum Co. of Canada** which has a rated capacity of 1.2 million hp.

Alcan Project

The biggest single development currently under way is by Alcan at the huge one million hp project at Chute-des-Passes in Northern Quebec.

Target date for completion is Aug. 1, 1959. When it comes into operation, Alcan will have installed capacity of 3,580,000 hp in Quebec alone.

It will add firm power output to the Alcan Saguenay system as a whole by 700,000 hp.

To utilize a portion of this power, new ingot capacity of about 150,000, including the 22,000 tons at the Isle Maligne plant brought in last year, will be built.

But the expansion isn't being written by major company's announcing plans.

It involves men on drawing boards and construction sites. In temperatures below 50 degrees last year construction crews of Alcan worked to push forward the new Chute-des-Passes project.

Target date for completion of tunnel driving is July 1, 1958. Concrete lining should be finished by April 1, 1959.

The close relation between industrial development and demand from other consumers can be found in the growth records of utilities which serve vast areas of the province.

Shawinigan Water & Power Co., for example, serves more than 242,000 customers in an area of about 16,000 sq. miles, stretching from the north shore of the St. Lawrence, about Quebec City, to Lake of Two Mountains, about 40 miles west of Montreal, and south of the St. Lawrence River from Montmagny County almost continuously to Lake St. Francis, the western limit of the province.

Extends South

The area served also extends south to the U. S. border with the exception of an area between St. Francis and Richelieu River.

Shawinigan and its subsidiaries combined electrical systems serve more than 440,000 customers in 57 of the 75 counties in Quebec in an area of about 31,000 sq. miles.

They have a combined installed capacity of more than 2.8 million hp, of which 1.8 million hp is developed, 330,000 hp is under development and about 665,000 hp is undeveloped.

Meanwhile, another giant in the field, Quebec Hydro-Electric Commission, is pushing ahead with projects and plans on several fronts.

At Beauharnois, the commission is going ahead with an extension to the existing power house to produce an additional 810,000 hp and bring installed capacity at the site to 2,235,000 hp.

Work is scheduled for completion in 1959. The ultimate output would be in the order of 13 billion kwh per year, equivalent to 365 carloads of coal of 50 tons each per day.

At Bersimis No. 1, the first four of eight units to be installed are in operation, the remaining four are expected to come into operation between the fall of 1957 and the fall of 1958.

At Bersimis No. 2, 23 miles downstream from Bersimis No. 1, the first two of five units are scheduled for completion in October, 1959, and the remainder between the fall of 1960 and early 1961.

Huge Capacity

Bersimis No. 1 and No. 2 will have an ultimate installed capacity of 1.2 million hp and 800,000 hp respectively, storage dams capable of impounding billions of cu. ft. of water, a 7.6-mile concrete-lined tunnel, a permanent townsite for 150 families, 2,100 circuit miles of transmission lines and related facilities between the Bersimis plants and Quebec and Montreal.

In addition, studies are being made to determine the feasibility of constructing a generating plant at Lachine with an ultimate capacity of 800,000 hp.

Preliminary estimates for such a plant indicate a cost of about $175 million of which it is anticipated that if constructed about $155 million would be spent prior to 1963.

On the Manicouagan River, about 30 miles east of the Bersimis River on the North Shore of the St. Lawrence River, it is estimated the river has a potential power capacity of about three million hp, subject to provision of adequate storage facilities. Intensive surveys are being carried out.

The big question is whether the Lachine project will be given priority over the Manicouagan or if both might be developed concurrently. There is also the question of timing.

To keep within the time schedule of expenditures of about $155 million estimated to go into the Lachine project, if started, prior to 1963, work would have to start by 1960.

Most power projects take about three years at the contemplated size.

However, it could — and probably would — go ahead much faster if demand was seen to warrant it.

With the high interest rate on borrowed money today, and with large capital outlays planned over the next few years, costs have to be considered very carefully.

Quebec Hydro has scheduled a program covering the period Sept. 30, 1955, through 1962 which originally provided for capital outlays of $495 million.

This has since been increased to $520 million to provide additional facilities. Toward the end of last year, $390 million remained to be spent.

Another power company on the North Shore of the St. Lawrence River provides an illustration how hydro electric development and industry go hand in hand.

The company is **Manicouagan Power Co.** which is owned 40% by **Canadian British Aluminium Ltd.** and 60% by **Quebec North Shore.**

At present, installed capacity of Manicouagan Power is 100,000 hp which will be increased to 250,000 hp by early 1958.

Under a long-term contract, the company has agreed to furnish CBA with sufficient power for stage 1 of 45,000 tons of ingot to be in full production in the spring in 1959.

Power for the balance of Stage 2 and for the third and fourth stages will be supplied by Quebec Hydro.

The ever present need of flexibility in transmission in satisfying the demand for peak loads, as well as the problems of firm power in terms of market demand and regulated flow have resulted in increasing co-operation between private and public power producers in the province.

As a result, consumers have obtained a maximum degree of reliability and service and security.

An Exampie

This is illustrated in the Manicouagan Power - Canadian British Aluminium-Quebec Hydro power arrangement.

It can be paralleled by many others. Shawinigan Water & Power, for example, purchases primary power from four other suppliers of electricity in Quebec.

They are: **St. Maurice Power Corp.**, capital stock of which other than the directors' qualifying shares is owned by Shawinigan; **Saguenay Power Co., Saguenay Transmission Co.**, and Quebec Hydro.

Price Brothers & Co. started construction in 1956 of a new hydro electric plant on the Saguenay River, incorporating the site of an existing plant. It will add 70,000 hp and bring total installed capacity of the company to 220,000 hp.

The project is called the Murdock-Willson Power Development and is to come into operation this fall in time to replace the smaller of the company's Saguenay power contracts which terminates at this time.

This summer, **Eastern Mining & Smelting Corp.'s** wholly owned subsidiary **Smelter Power Corp.** brought in its 43,000-hp plant on the Chicoutimi River. The power will be used in Quebec's first combined nickel and copper-smelter refinery.

During the period of smelter instruction, and following commencement of operation, surplus power has been contracted for sale to the Saguenay Power Corp. Cost of the plant exceeded $5.6 million.

Along with the development of new power capacity in the province has been parallel growth—new transmission lines, towers, substations, etc.

To carry power from Quebec Hydro's Bersimis development to Quebec City and Montreal, for example, a transmission line was needed.

The Labrieville - Quebec section of the line comprises two double circuit parallel lines strung along two rows of towers, each supporting six conductors and two ground wires. The Quebec-Montreal section is one double circuit line. As many as 1,717 towers had to be erected.

The transmission line such as the circuit linking Labrieville and Montreal — most of which travels across uninhabited areas and over mountains — makes it necessary to spread out maintenance crews along its route to supervise the line and make necessary repairs.

To enable operators in the control room in Montreal to communicate at any time with both the power houses and various stations along the circuits, Quebec Hydro has installed a microwave system which connects Beauharnois, Quebec and Bersimis directly to the Montreal terminal.

For that purpose, 15 steel towers were erected, their heights varying from 100 to 350 ft. This transmission system consists of 15 circuits for voice communications and 18 for teletype, telemetering, load control and for tracking down faults along the line.

In this way, it is possible for the control room in Montreal to control all Quebec Hydro power houses and systems, except for the Northwestern system which remains isolated at the head of the Ottawa River, in Abitibi.

Ninety-five percent of the networks on the western side of the Laurentian side of the range — Bersimis, Lake St. John, Saguenay and St. Maurice, as well as Beauharnois, Cedars and Riviere-des-Prairies are inter-connected.

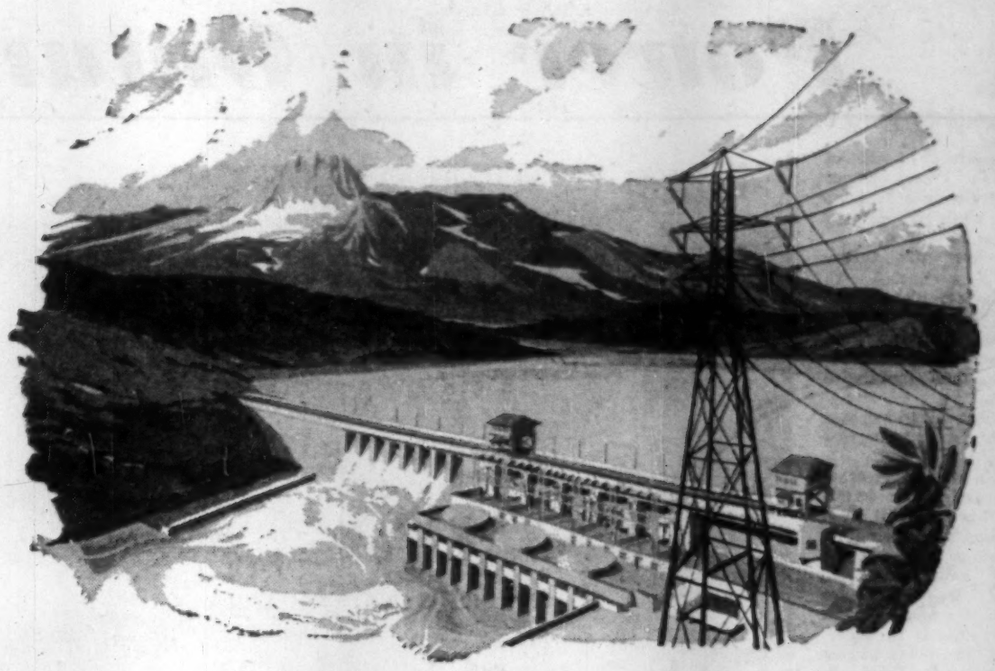
This means that should the demand for electricity increase in any area including the lower part of the St. Lawrence and the Gaspe

(Continued on page 63)

The Equipment Picture

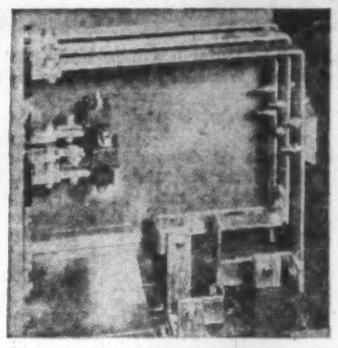
The Canadian Lamp and Fixtures Manufacturers Association Inc. sent the following statement to all candidates for the Federal elections, drawing attention to the unapproved-equipment problem:

- Are you aware that a serious loophole in Federal legislation is endangering the lives, the homes and the employment of all Canadians?
- Do you realize that a serious hardship is being imposed upon the Canadian electrical industry which ranks fourth in importance among all Canadian industries?
- Do you know that Canadian electrical manufacturers must manufacture according to Canadian code standards and subject to provincial inspection authorities whereas electrical goods of foreign manufacture are allowed to enter freely without approval?
- It is a fact that $55 million in fire losses in Canada over the past five years is directly attributable to defective wiring circuits and the use of substandard unapproved imported electrical equipment such as appliances, portable lamps, lighting fixtures and numerous other electrical items.



Canada's power industry builds for the future

...and Noranda lends a hand with copper and brass



Noranda Copper Bus Bar is used in many electrical applications because it is the best conductor of electricity commercially available. *Photo courtesy Amalgamated Electric Corporation, Limited, Toronto.*

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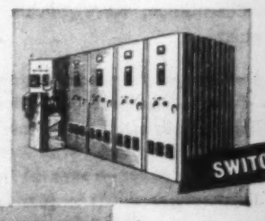

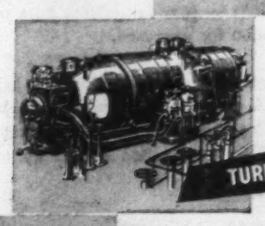

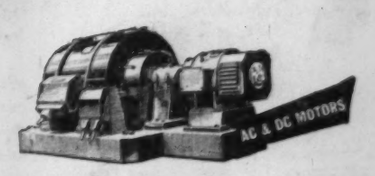

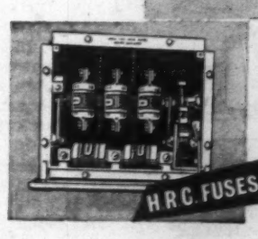

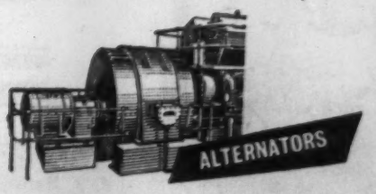

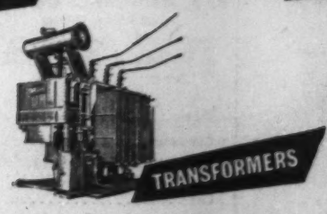

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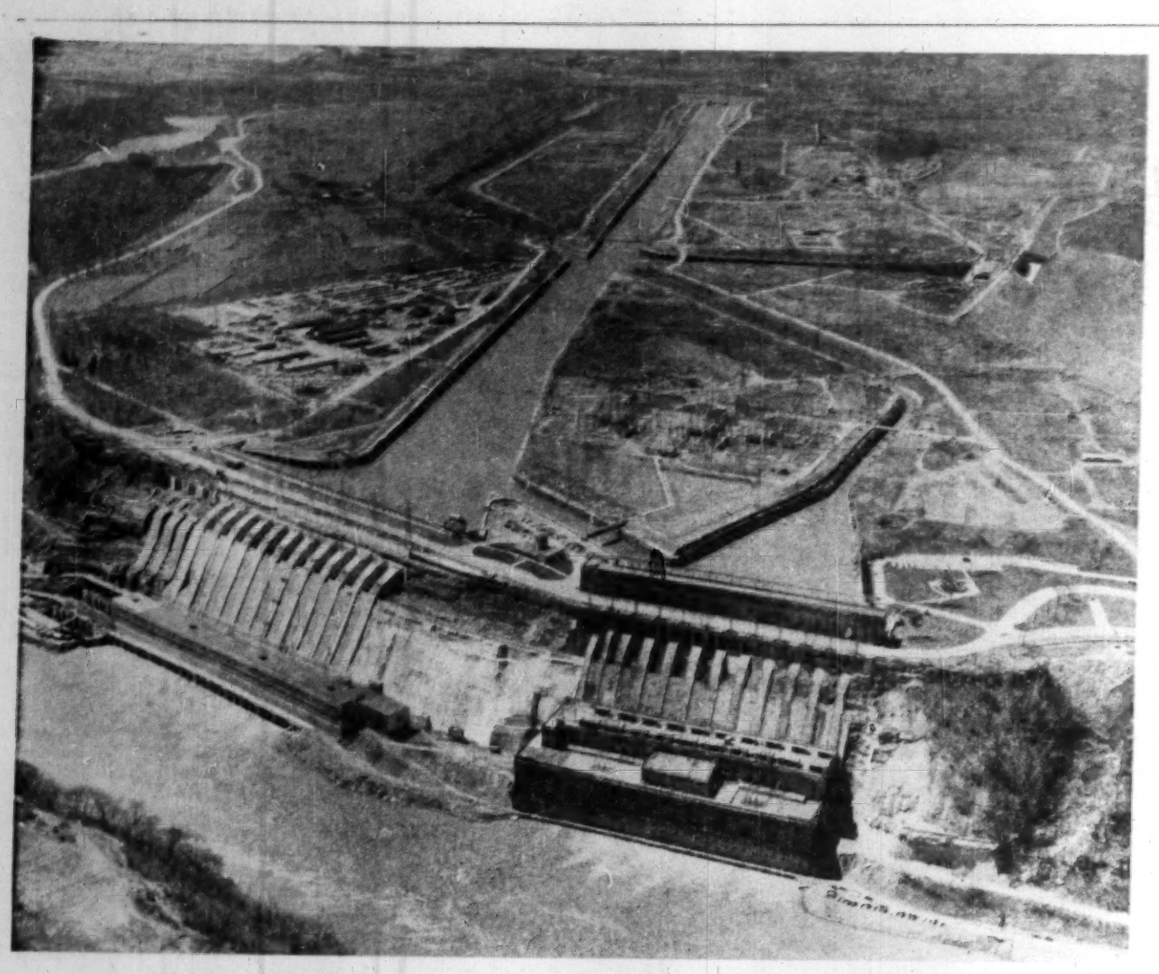

GIANT POWER "TWINS" provide 1.3 million kw for Canada's industrial heartland. They are Sir Adam Beck Niagara Generating Stations Nos. 1 and 2.

Power on the Prairies

Big power projects now in hand in each of the three Prairie provinces underline the growth and progress in those areas as industrial development increases and rural electrification spreads.

But behind the planning of those projects lay difficult decisions for each province on whether hydro or thermal sources should be developed and, if thermal, what kind of fuel should be used.

In Manitoba it has been a question of thermal power now, major hydro later. In Alberta hydro and thermal sources are contributing more or less equally. In Saskatchewan long looks are being taken at hydro potentialities in the north but current emphasis is on thermal power.

And even in the thermal field, the power entities in the Prairie provinces have had to study the economics of competing fuels closely.

In many cases, the decision has been a compromise with new stations built or building so that they can be switched, if the need arises, from one fuel to the other.

Alberta's Problems

Demand for power is expected to double in Alberta in the next five years and plans are progressing to boost generating capacity of private and publicly-owned stations from the 1956 high of 573,164 kw to about 1.1 million kw by 1961.

The addition of a second 23,000 hp unit at **Calgary Power Ltd.'s** Cascades plant was a major development this year and a second 66,000 hp steam turbine is due for operation next year at the company's Wabamun station, 40 miles from Edmonton. A third unit, possibly of 100,000 hp or more, is in mind for Wabamun by 1960.

Wabamun is one of the plants recently installed or now being built in the Prairies with alternative fuel operation. Presently fueled by waste natural gas from nearby oilfields, it is convertible to coal.

Calgary Power has also been investigating extensions of the Spray and Rundle hydro plants which could double their present capacities of 85,000 hp and a major unit for the Spray installation is scheduled for next year.

Last year, **Canadian Utilities Ltd.** brought its steam turbine plant near Forestburg on Battle River into operation with a 34,000 hp unit with provision for additions. This year, a 10,000 hp unit came into production in the Sturgeon Lake area.

Northland Utilities Ltd. brought total rating of its Astoria River plant near Jasper to 1,800 hp last year with the introduction of a turbine of 1,000 hp.

This year also, an additional 3,000 kw unit was scheduled for the Fairview steam plant in the Peace River district which is jointly operated by Northland and Canadian Utilities.

The City of Edmonton has ordered two more 30,000 kw gas turbines for its municipally-owned plant for operation next year and in 1959 respectively, while Lethbridge was extending its plant this year with a 10,000 kw gas turbine.

Growing demand has also brought major developments in the province in transmission networks and erection of new substations.

In Alberta, the hydro possibilities on the North Saskatchewan River above Rocky Mountain House and on a tributary, the Brazeau River, have been closely studied with long-term needs in mind.

It is believed that potentialities for between 300,000 hp and 400,000 hp are at Fitzgerald in Alberta and Fort Smith, about 17 miles north in the Northwest Territories.

Survey work here has suggested that the power could supply mining activities in the Territories including Yellowknife and the large lead-zinc deposit at Pine Point.

Alberta's huge and cheap supplies of coal are also looming large in the long-term power picture. Reports of promoters with the idea of building power plants to supply the U.S. northwest power pool persist in this connection.

Last year, peak load in Alberta went up by 14% and, but for mild weather would have been greater. Generation by steam plants shot up 31% as compared with a 5% increase by hydro plants.

Growth in Saskatchewan

Major capacity problems have been posed for Saskatchewan as a result of the increase in industrial needs and the growing domestic demand.

Here is an example of a comparatively small power system having to expand at a pace that can only be called breakneck to meet demand.

In recent times, that demand has been shooting up 20% a year and the provincial power corporation has had to think far ahead and plan carefully to keep ahead. But it has meant thinking in terms of doubled capacity every four years.

Here again, while the emphasis is on thermal power just now, the long-term look has been on hydro possibilities in the north, especially because of the current and prospective developments there in mining and other industrial fields.

Saskatchewan already has in hand plans for expansion of existing stations and construction of new stations that will nearly double capacity for the more populated and industrialized areas over the next three years.

Due next year is the first unit in the thermal station at Estevan — supplementing the existing station — and that plant will continue to grow till 1961 with its ultimate capacity governed by needs. With four units scheduled, the first of 66,000 kw, the last two could be up to twice that size.

Another $40 million plant is also going in at Saskatoon where the existing station was expanded last year. Here again, ultimate size will be governed by needs. Though the official target is for a total of 264,000 kw, it could quite well reach capacity of over 300,000 kw.

The same pace is evident in other parts of Saskatchewan. Examples are at Kindersley where two additional 8,000 kw gas turbines — first of their kind in the province — are going in, and at the Swift Current plant where expansion plans are in hand.

North Surveyed

Meeting the growing needs of industry and domestic consumers, despite the pace of increase is not enough. There must be something in hand for new developments. That is why the whole of northern Saskatchewan has been surveyed for power potentialities.

The possible industrial pattern to be catered for is substantial. The uranium mines are on the north side of Lake Athabasca and the copper interests of **Anglo-Rouyn Mines Ltd., a Rio Tinto** subsidiary, lie northeast in the Lac La Ronge area. Island Falls, feeding power to Flin Flon is southward.

One of the more spectacular schemes that has received attention here is to raise the level of Tazin Lake which drains presently into Slave River. There is a drop of nearly 500 ft. between it and Athabasca that could be developed to produce 72,000 hp.

Another possible development is on the Fondalac River with a potential return of 120,000 hp. There are also possibilities along Churchill River and Nistowiak Falls out of Lac La Ronge.

Reindeer River has possibilities and then there is the costly and controversial Outlook Dam scheme on Saskatchewan River. Also in mind are places like Squaw Rapids, Fort a la Corne and Nipawin.

Another major task for Saskatchewan has been the integration of transmission systems in which rapid progress has been achieved in the tying together of the north and south systems.

The speed-up in farm electrification has also presented major problems but it is well on the way to hitting its target of 65,000 farms by 1961.

Manitoba Turning Point

The development of power at Grand Rapids on the middle Nelson for **International Nickel Co.'s** Moak-Mystery Lakes mining project marked a major change in the power outlook for Manitoba.

Hydro power potentialities in the northern half of the province add up to a substantial total, and the Grand Rapids plant is seen as the precursor of a series of large Nelson River stations in the future, supplying what provincial authorities believe will one day be a large, interconnected system.

It is estimated that water resources for power in the province total more than five million hp, but only some 15% lies within convenient reach. This is on Winnipeg River in the southeast and it has all virtually been taken up.

But at Grand Rapid, where the Saskatchewan River enters Lake Winnipeg is the most promising hydro source that could provide power for the southern parts of the province.

Upwards of 250,000 hp could be developed here and its development could be needed prior to the middle 1960's. But, to get the power south would involve 250 miles of transmission over terrain where the cost could run to $90,000 a mile.

Immediate Needs

But meanwhile, for its immediate needs in the southern part of the province, Manitoba is turning to thermal power, while debating the transmission economics from northern sites. Here it is a question of waiting till the market will justify the extra transmission costs.

The climb in power load in the province has been consistent for 10 years with much steeper upswings recently over the 8% average increase on firm peaks experienced since 1949.

That rate of climb represents a need to double the power supplies in about eight years, and major steps are already in hand to do this.

Construction of the thermal station at Brandon and another at East Selkirk are examples of the progress. Together, they will add more than 250,000 hp by 1960 to the combined southern system — an addition in four years of some 45%.

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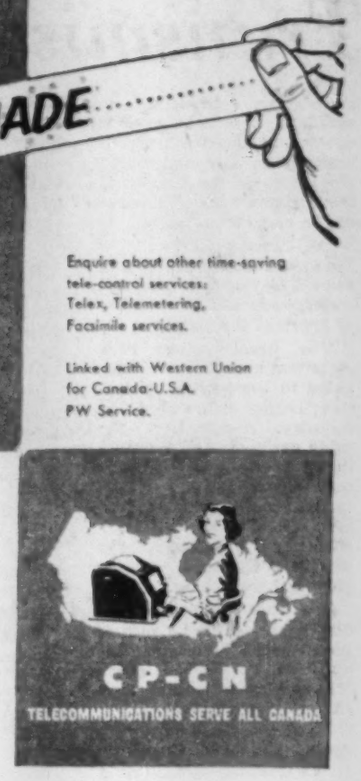

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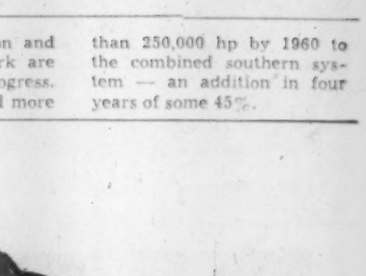

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41½ miles of Canada Wire high voltage underground cable installed at Ontario Hydro's Toronto Expressway Project

Four feet below Toronto's traffic-heavy waterfront, cradled in sand and protected from damage by their tough protective covering and overlapping concrete slabs, are 12 underground power transmission cables. They can be called upon to deliver 675,000 h.p. at 115,000 volts.

This Ontario Hydro underground power cable system was installed to replace 31 steel towers and associated transmission facilities to make way for Toronto's vital new Frederick G. Gardiner Expressway and represents one of Canada's largest underground cable projects.

Overcoming obstacles along the 3½-mile cable route was a challenging task. For example, concrete ducts had to be installed under the heavily-travelled Lakeshore Boulevard and busy railway lines. Other services had to be avoided.

It is a matter of pride to us that Canada Wire was called upon to supply and install, as the general contractors, the 41½ miles of cable required. In addition to the cable, Canada Wire engineers designed the cable joints, terminals and reservoirs . . . all of which were produced in highly skilled and precise operations in the Canada Wire Leaside plant from Canadian-made materials.

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Pathways of Power

Transmission Lines Hold the Balance

However, dramatic or mundane its use, electric power is a transmission triumph in Canada, where the distances are great and the customers few—in terms of the rest of the world.

Yet Canada enjoys one of the lowest electricity rates in the world, thanks to plentiful waterpower and the wonder of low cost transmission.

The transmission lines somehow have become relegated to the position of unsung heroes in the electrical industry. Apart from the cable designers and the utility engineers who plan and maintain them they are utilitarian workhorses without spectacle. Yet without their efficiency it would be hard to imagine Canada's present electrical well-being.

The transmission line frequently holds the balance of power in the dollar and cents equation between low-cost waterpower and higher cost thermal power.

No more striking example could be found than in Hydro Quebec's bold Bersimis development.

Hydro Quebec's economists and engineers have been able to design a way to move Bersimis' enormous block of power into industrialized Montreal at a cost less than it would take to harness the Lachine rapids almost at Montreal's back door . . . and considerably less than the cost of constructing a thermal plant right in the middle of the city.

From Bersimis to Montreal it is roughly 400 miles, some of it dense forest and bushland.

To date it's one of the most imaginative ventures in transmission economics in Canada, although Ontario Hydro's farflung grid system and Alcan's Kemano to Kitimat all-aluminum line might match it in some respects for pure boldness.

Next Project

Next on the horizon: the harnessing of the gigantic Hamilton River in Labrador. Where its power will go, is an economic question still to be answered.

But some of the best transmission brains in the business are working on it and no doubt someday the great and untapped potential for industrial strength in the Hamilton will be humming from steel tower to steel tower across the wastes of Labrador to provide the incentive for some great industrial complex.

Because of its lack of glamour, though, even when the Hamilton is producing, even when Northern British Columbia's power packed potential is converted to harnessed energy the prosaic transmission line probably will come in for little if any of the public attention.

Yet, at either place, it could account for almost half of the entire development cost.

The ratio of transmission to generating capital cost is surprisingly high. Right-of-ways, cable, towers, transformers, and construction frequently run to half or even more of the total development cost of a project.

The average for Canada is somewhat lower than half. How much is not known exactly but, the informed sources estimate, it can't be much lower.

This year, however, is something of an off year for transmission line construction. The estimated $281 million to be spent on electric power plant production (generating facilities) is about two thirds more than will be spent on transmission and distribution.

Overhead transmission lines will take about $42 million, primary distribution networks will cost about the same amount. Substations and underground work will require an additional $20-$25 million.

One reason the generating station - transmission capital cost ratio is changed this year is the result of the Canadian trend to thermal generating.

Now that most major water power sites have been utilized the thermal station is coming into its own and normally it is found to be cheaper to bring the fuel to the market for power than to make the power at the fuel site for transmission to the market.

Short Hauls

It would appear that much of the transmission construction of the future will consist primarily of short hauls of high cost power rather than long hauls of low cost power.

Either way the carrying agency probably will remain the same: the aluminum or copper conductor, reinforced or insulated, or both.

Power transmission knows few unsurmountable obstacles — except for distance. Mountains, even 30-mile-wide rivers can be traversed.

The basic transmission method in Canada, of course, is the overhead ACSR (aluminum cable steel reinforced) suspended from steel towers. Underground and underwater cables each require special design and manufacturing attention and they usually are substantially more expensive.

For many practical and economical reasons, power is generated at extremely low voltage. It is rarely produced at more than 14,000 v. When the transmission job begins, however, step-up equipment transforms it to higher voltages.

As a general rule, large amounts of power which must be transmitted long distances are moved most economically at high voltages.

The current standard in Canada is the 230 kv line although some lines are rated at substantially higher levels.

Where distances are shorter, loads lighter, lower voltages are used. Relatively standard are 115 kv, 44 kv, and 26 kv.

It is only comparatively recently, however, that it has been possible to carry such large loads. Probably the key step in power transmission was taken as recently as 1886 when the first use of alternating current was introduced.

The opportunity of transforming down to reasonable secondary distribution voltages and larger currents gained much prestige for the new kind of current.

Just prior to that McCracken's famous insulation research had made our modern cable manufacturing concept practical and it wasn't long before the world was embarked upon a transmission cost race.

At that time one mile was considered to be the limit for power transmission and the accepted load capacity was 2,000 v.

A tremendous step was made by Ferranti in 1890. He conceived the idea of generating on a river site near London.

Transmission was at an unheard-of 10,000 v, single phase, and a frequency of 85 cycles. He proposed an 11,000 v two conductor concentric cable to operate with the outer conductor grounded.

The cable was insulated with paper tapes pre-impregnated with mineral wax and it was manufactured to Ferranti's specifications in the spring of 1890 by the **London Electric Supply Corp.** The cables were laid in September of 1890 for a distance of 6½ miles into central London.

Probably the most romantic incident in the entire history of cable making and certainly one steeped in drama, occurred just after the cables were laid.

The Board of Trade was so concerned about operating the cable at the inconceivable load of 10 kv that it passed a regulation to prohibit it. Ferranti defied the regulation and insisted that the grounding of the outer conductor provided perfect safety.

No Harm

To prove his contention Ferranti offered to have a cold chisel driven right through the conductor while it was alive at 10,000 volts. The stage was set and the authorities came to witness the demonstration. The chisel was held by H. W. Kolle, a Ferranti assistant, and as they had contended no harm was done.

It is interesting to note that present knowledge of cable testing shows that Ferranti's pioneer project could have operated equally successfully at 17 kv.

Improvements came fast and furious from that point on:

—In 1892 the Montreal Light, Heat and Power Co. installed on its Chambly circuits 3.4 miles of three-conductor paper insulated cable, rated at 25 kv, grounded neutral — and still in service.

—In 1914 Germany introduced the principle of shielding the insulated conductors of a cable and on that foundation cables up to 66 kv had been produced and operated by 1924.

—During the Twenties, Atkinson and Fisher in the U.S., Emanuel in Italy, made basic advancements that put the capacity figure up to 132 kv.

Since then the rises in capacity ratings have been substantial and steady.

It is interesting to note that in the original Ferranti cable it was designed for operation at 85 cycle. Cycle setting was as much a problem in those early days of electric power use as it is, apparently, today.

For a long time, cable and transmission engineers around the world simply could not decide which cycle gave the best performance and as a result a multitude of different cycle methods were worked out.

Of course those who set upon anything other than the standard 60 cycle have been embarrassed terribly — as witness Ontario Hydro's hundreds of millions of dollars spending for conversion from 25 cycle to 60.

At any cycle, however, the simplest type of cable which can be imagined is a bare transmission conductor suspended in air — as in the case of an overhead power line.

Porcelain pins or suspension type units at the points of support are its only "outside" insulations. The true insulation of the wire for the majority of its length is the air which surrounds it.

This air is well known to be an efficient insulator in some respects though wanting in others.

On the credit side: it is a gaseous material and has a low dielectric constant compared with any known solid type of insulation; if the insulating air at the surface of the conductor becomes ionized due to high dielectric stress it is easily carried away and replaced by new air.

On the debit side: due to its gaseous nature it has no mechanical stability and the conductors spaced in air require rigid supports at intervals: it takes a lot of air to do the job and in metropolitan areas where ground space is at a premium it is sometimes uneconomic.

Where ground space is not at a premium, however, the bare overhead conductor has found its place. There has always been considerable interest in the use of aluminum and when it is suitably reinforced with steel to give it longitudinal strength it has become the virtual standard material for long distance overhead transmission at

(Continued on page 61)

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This Travograph, which we recently installed in our shop, is a remarkable machine. The electronic eye, shown on the left side of the photograph, follows the design and simultaneously transfers it to the steel, on the right hand side, in the form of oxy-acetylene cutting. Many intricate designs and several thicknesses may be cut at one time. Obviously, this machine not only saves time but provides the ultimate in accuracy.

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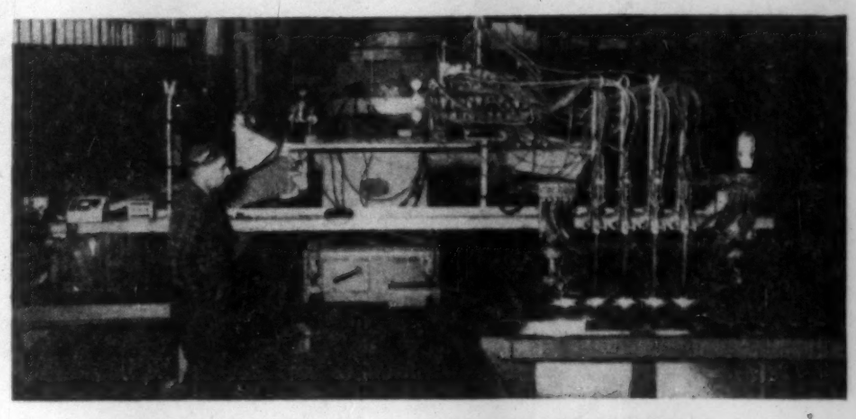

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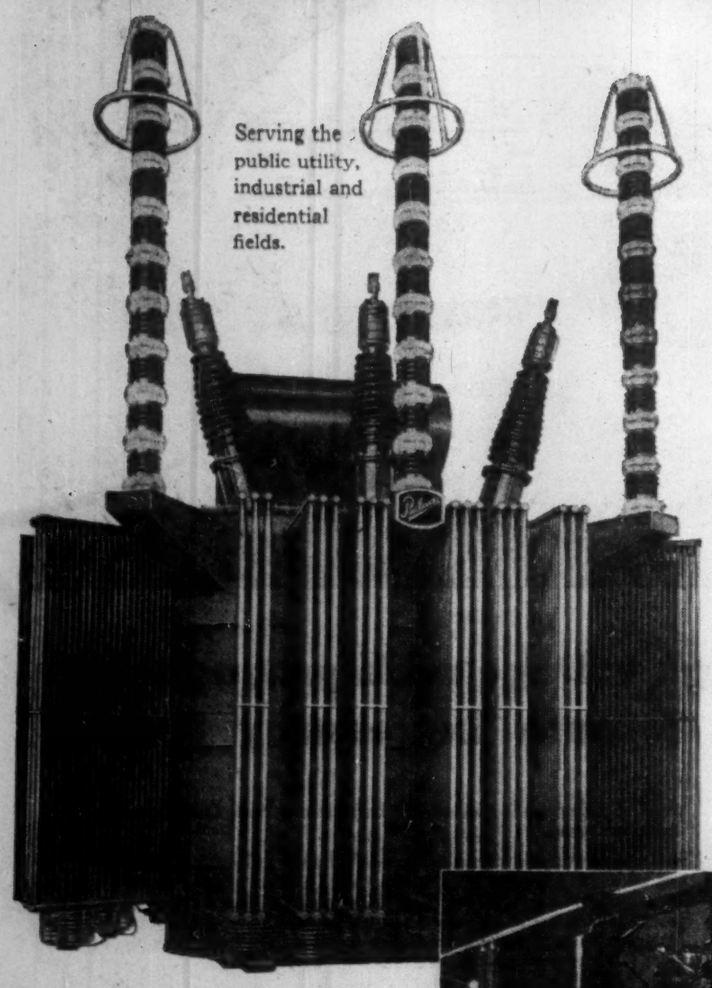

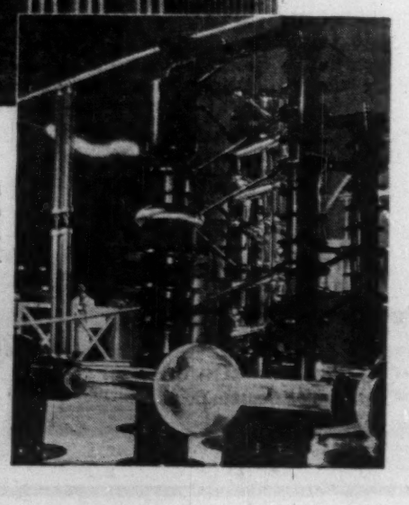

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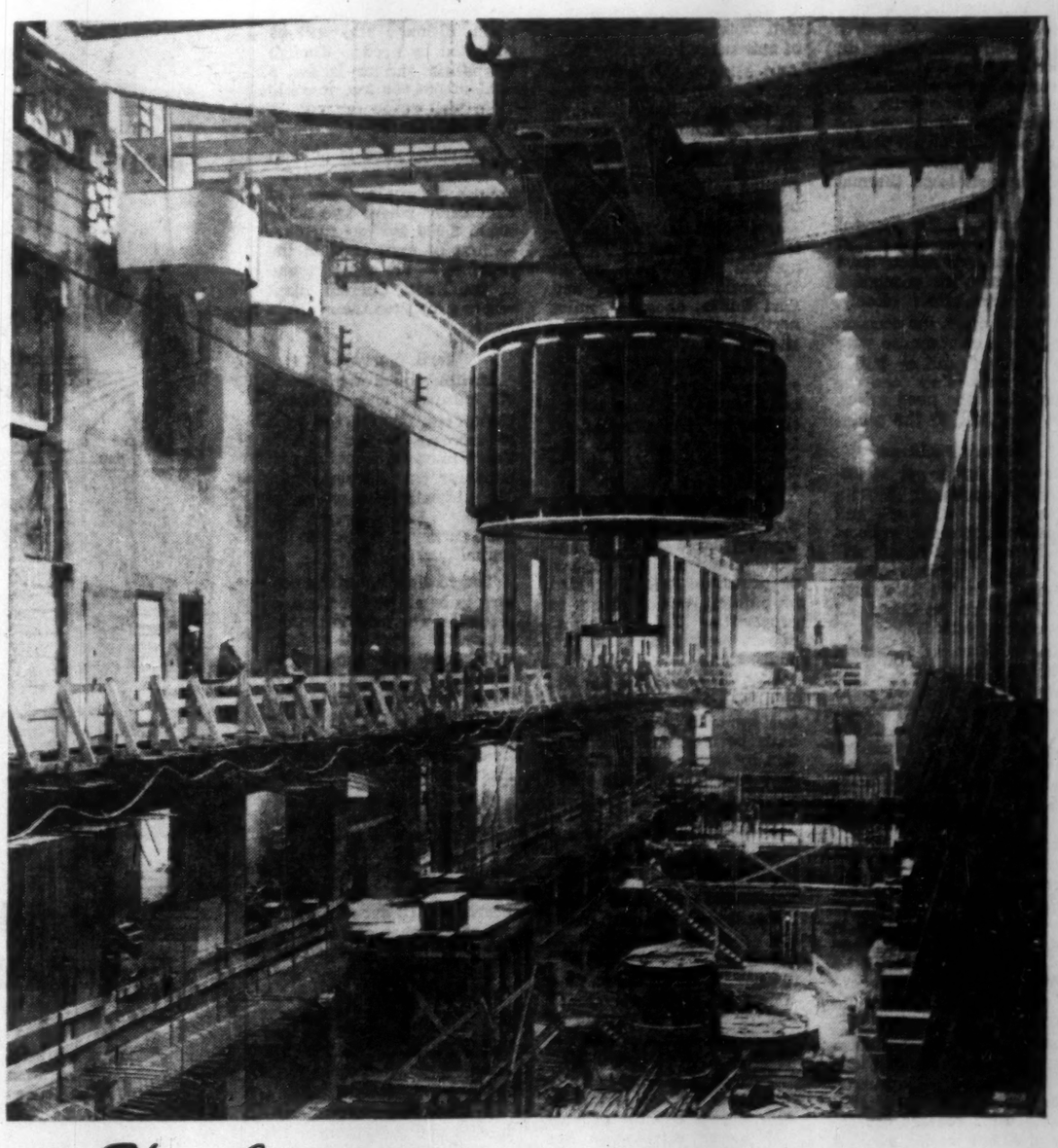

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Pathways of Power

Dancing Cables and 'Copters

(Continued from page 60)

high voltage.

Its development as a conductor for insulated cables has been slower, partly due to difficulties in jointing now well on the way to solution, but also partly due to the fact that aluminum loses some of its lightness advantages when insulated.

Aluminum has a volume conductivity approximately 61% of that of copper.

But as aluminum is only about one-third the weight of copper it has a mass conductivity about twice that of copper.

An insulated cable with an aluminum conductor when compared with one having a copper conductor of exactly equivalent current carrying capacity requires a much greater volume of insulating and sheathing material.

The initial saving in weight through use of aluminum, therefore, frequently is lost because of the added weight requirements of the insulant.

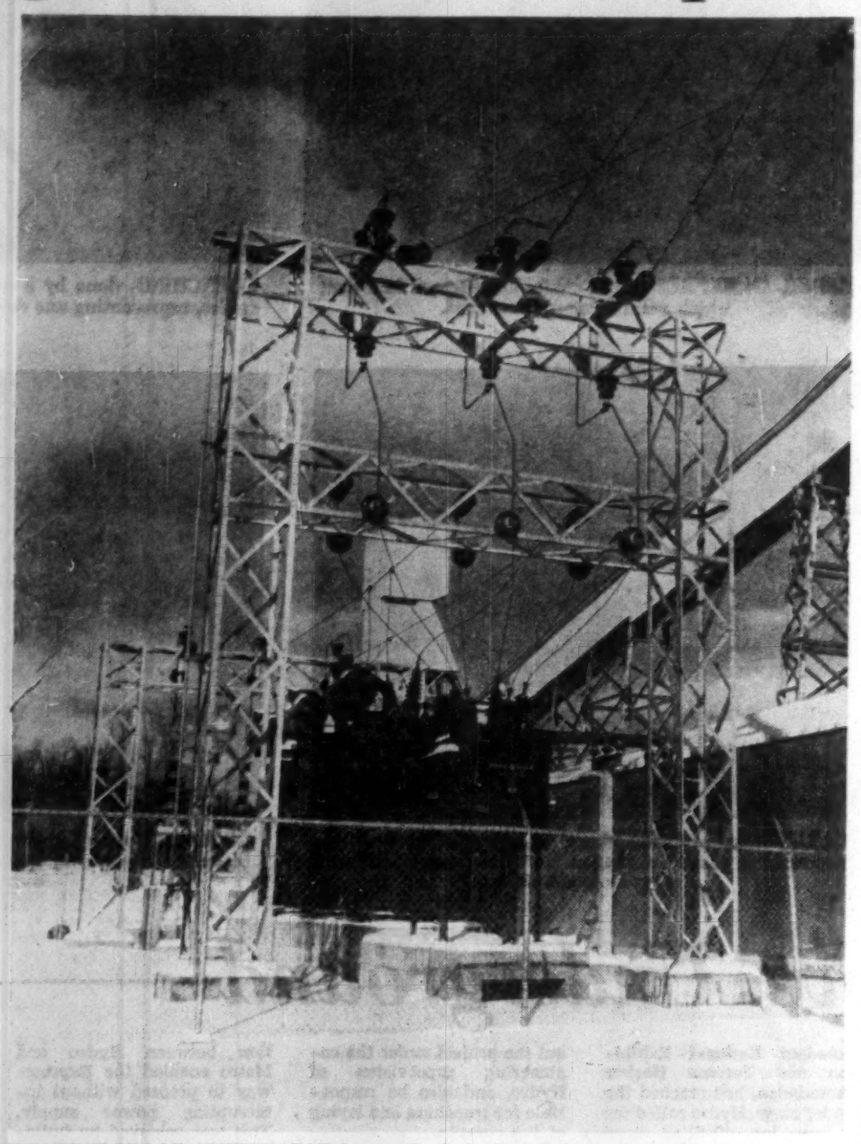
Once the type of cable has been specified, however, the actual transmission line building is begun.

It is a general rule that long and heavy high voltage transmission lines, for both economical and engineering reasons, usually are carried on steel towers. Wood pole lines have an initial lower cost and they are customarily used for lower voltage and lighter lines.

To select the most suitable route for a transmission line is another complicated process. First it is necessary to study the terrain. The shortest route cannot always be followed since many natural and man-made obstacles must be avoided.

Aerial photography is becoming one of the best route selection aids to modern transmission line planners but soil studies are important too.

Wherever possible transmission routes from the generating station to the power consumer are chosen to avoid quicksand, swamp, mukeg, fill dumps, bottomless soils, low-bearing moisture-saturated clays; not only because of the tower construction problems, they might pose but because of the grounding difficulty.



WEATHERPROOF SWITCHGEAR houses both high and low voltage breakers in steel enclosures. This all-weather substation reduces incoming power to 2,400 volts and 600 volts, using 2,500 kva and 667 kva transformers.

In Northern Ontario, for example, extensive rock ridges present a high electrical resistance problem that requires elaborate measures to ensure proper grounding.

Of course, the voltage being transmitted is an important factor in the design of the towers.

At 230 kv the phase-to-phase spacing and the distance from any conductor to the nearest steel must be much greater than it would be at 115 kv.

The effects of sleet, heavy winds and the high and low temperatures on the conductors are some of the mechanical forces that must be considered along with the electrical requirements in determining the spacing required.

In double circuit towers the middle arm is generally longer than the top and bottom arms to allow for "galloping," unloading of ice, and "aeolian vibrations."

Greek Idea

The recognition and use of aeolian vibrations dates back to the Greeks who colonized Asia Minor.

They discovered that by stretching wires of different sizes and lengths on a wooden frame between pegs at various tensions they could tune them so that when exposed to the wind, they would produce harmonic sounds.

Aeolian vibration is serious in stranded cables on long spans at heavy tensions . . . it puts a particularly heavy stress on the individual strands of wire at the points where they are supported by the tower.

Another form of vibration is "galloping." This is a condition where the cables do not dance in unison and, therefore, conductor spacing must be designed carefully to allow considerable freedom of movement of conductors to safeguard against electrical interference.

Transmission line design still has to be made perfect and no amount of modern technology has enabled power companies to put a line into operation and then leave it alone.

The threat of trouble is continuous. Until recently line maintenance entailed permanent ground crews making laborious checks but now the helicopter has taken much of the drudgery out of the job.

A Canadian utility became one of the first, if not the first, power generator company to use helicopters for line patrol work.

The 'copters are equipped with radio facilities and as they skim low over the transmission line an observer is in constant contact with a mobile patrol crew on the ground. Line patrol costs have been cut by an estimated 75% as a result.

Other advances have been made as well. Here are a few of the notable ones:

Underground Cable Cooling — It was pioneered by Ontario Hydro and it ranks as a major world first. (For details see p. 62.)

The 30- kv Kemano Cable — A singular first for Canada. This cable has an aluminum conductor and an aluminum sheath and the sheath particularly represents an innovation in extra high voltage cable engineering.

It was the first all aluminum high voltage cable in the world, as well as the first cable system of its rating designed in its entirety in all the British Commonwealth or in North America.

It was the first cable, in fact, having an operating rating of more than 161 kv that was designed, developed, and manufactured in North America.

The need for such a cable was a straight cost proposition. Some way had to be found to take gigantic hunks of electricity out of the mountain cavern generating station at Kemano to the start of the regular transmission line. The distance was 2,000 feet.

Power is generated at Kemano at a generator voltage of 13.8 kv and the engineers found that if they tried to move the plant's 2.2 million hp out of the rock cavern at that low a voltage their loss would be substantial. The answer was to move the transformers right into the powerhouse and to design an insulated cable to bridge the transformer and the transmission line.

Rimouski Cable — The Rimouski cable was definitely another cable triumph for Canada. The series of cables that the Canada Wire and Cable Co. and Hydro Quebec designed for the lower St. Lawrence River crossing are the longest high tension power conductors ever placed under water. (Shortly after, however, B.C. Electric ordered a British-made cable: higher load, shorter distance.)

Four identical cables, 28 miles in length, were laid in straight parallel lines from Pointe aux Outardes, on the North Shore, to the opposite bank of the St. Lawrence. A 161/69 kv transformer station is located at the north end and a reverse 69/161 kv station has been placed on the south side.

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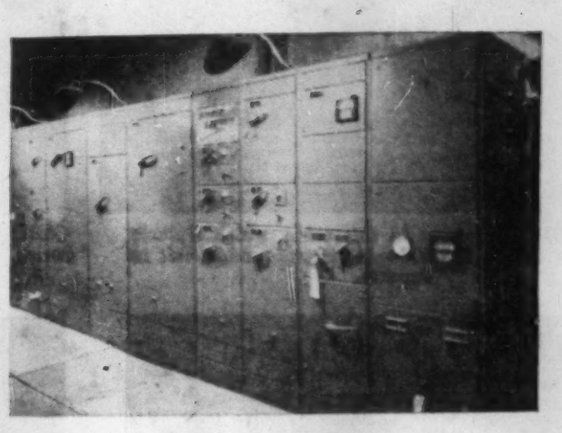

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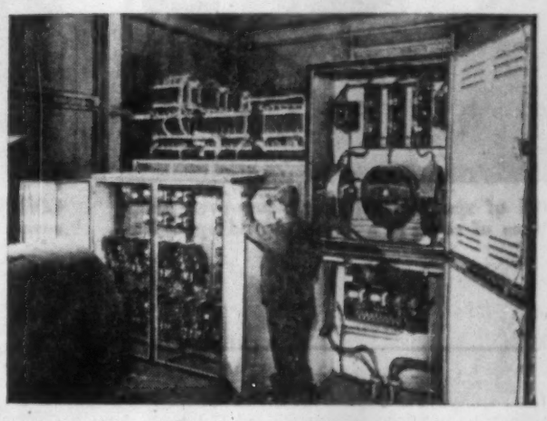

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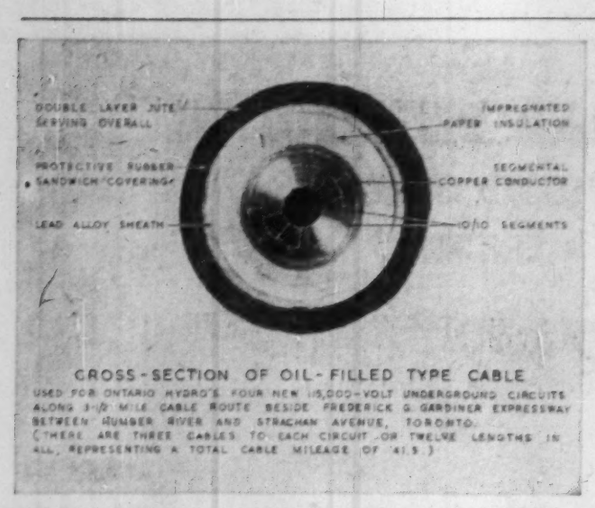
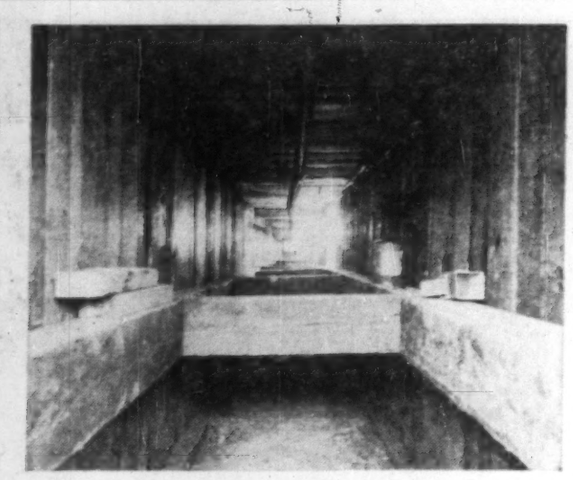


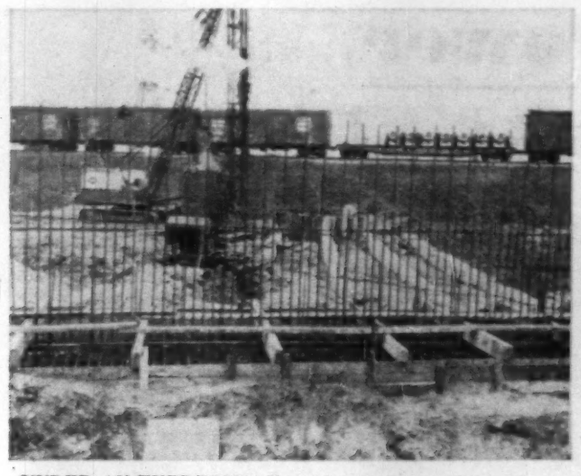
CROSS-SECTION OF OIL-FILLED TYPE CABLE

USED FOR ONTARIO HYDRO'S FOUR NEW 115,000-VOLT UNDERGROUND CIRCUITS ALONG 3-1/2 MILE CABLE ROUTE BESIDE FREDERICK G. GARDINER EXPRESSWAY BETWEEN HUMBER RIVER AND STRACHAN AVENUE, TORONTO. (THERE ARE THREE CABLES TO EACH CIRCUIT—OR TWELVE LENGTHS IN ALL, REPRESENTING A TOTAL CABLE MILEAGE OF 41.5.)

OIL PROVIDES pressure in this cable, which Ontario Hydro uses for its 115,000-volt underground circuit in Toronto.



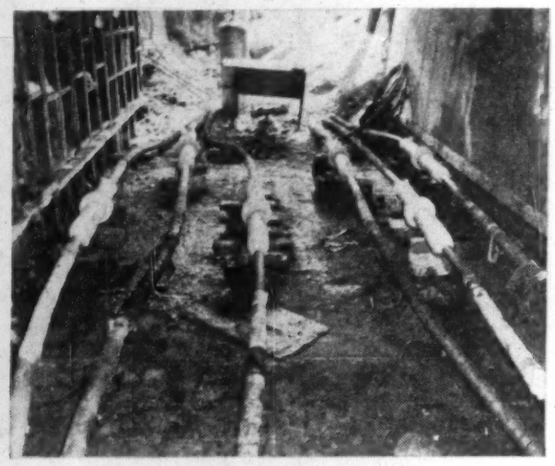
CABLES RUN through tunnels under a railway embankment. The tunnels were reinforced with wood cribbing.



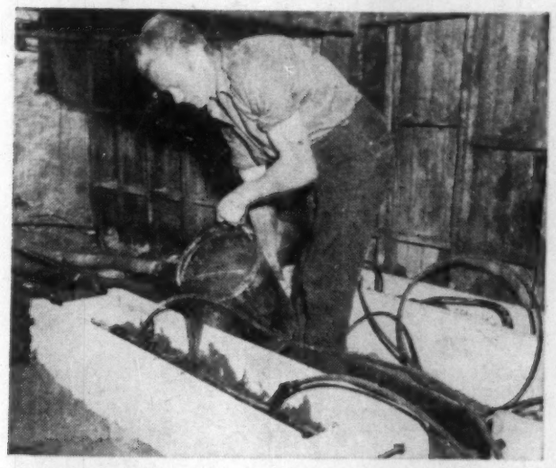
UNDER AN EXPRESSWAY, cables are encased in a duct which will be concrete-covered.

TRENCHING, done by a power-driven excavator. Three cables, representing one circuit, are placed in each trench.

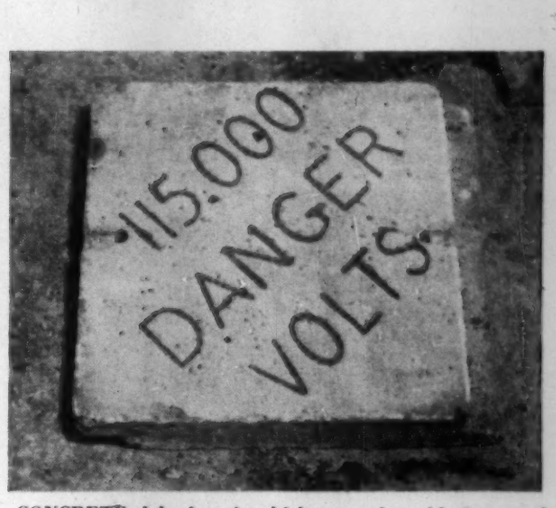
APPLICATION of special insulating paper over joints between sections of cable is a highly skilled operation.



COMPLETED joints are enclosed in metal sleeves which cover the oil-impregnated insulating paper. Talcum is used to reveal oil leaks.



CABLE joints are then placed in concrete "coffins" and hot rosin is poured over them, to be covered finally with a two-in. concrete lid.



CONCRETE slabs four in. thick cover the cable from end to end. Although buried, everyone of them carries this warning sign.

115,000 Volts Move Underground

A new cooling system for underground power cables which has been developed by the **Hydro-Electric Power Commission of Ontario** and installed along a 3½-mile route in Toronto, may mean the saving of millions of dollars in the future for power-growth areas.

By running cold water through polyethylene pipe alongside four 115,000 volt transmission cables, Hydro expects to increase capacity of the circuits by about 50%.

The idea was developed by Hydro's Research Division.

The cooling system has been installed in the largest cable-laying project ever undertaken in Ontario.

The project, scheduled for completion next month, replaces 31 steel towers and associated overhead transmission facilities, and was necessitated by the construction of Metropolitan Toronto's new Lakeshore Expressway.

Hydro relinquished its right-of-way to Metro for the Expressway, and Metro undertook to meet the cost, estimated at $3.5 million, of providing Hydro with equivalent underground transmission facilities.

By the summer of 1955, planning, which involved negotiations with half-a-dozen authorities including **Canadian National Railways,** the **Canadian National Exhibition** and **Toronto Harbor Commission,** had reached the tender stage. Hydro called for tenders for oil-filled type cable to its own specifications, and at the end of 1955, **Canada Wire & Cable Co.** got the job.

The company was to manufacture the cable and carry out the project under the engineering supervision of Hydro, and also be responsible for trenching and laying of the circuits.

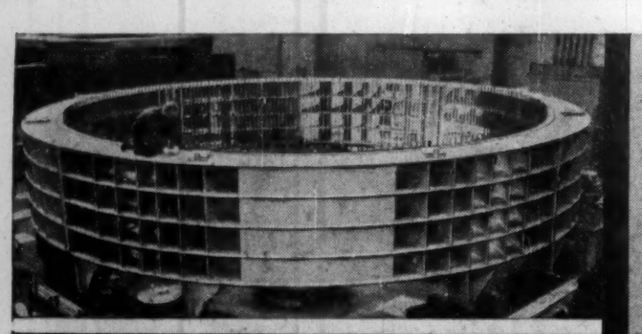
Each of the four circuits to be installed required three cables which added up to a total length of 41.5 miles of cable to cover the route.

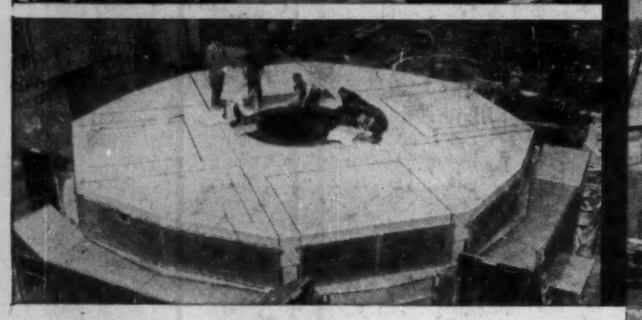
Meanwhile, close co-operation between Hydro and Metro enabled the Expressway to proceed without interrupting power supply. This was achieved by building two temporary wood pole lines for about two miles to permit removal of the existing steel towers standing in the way of the Expressway construction.

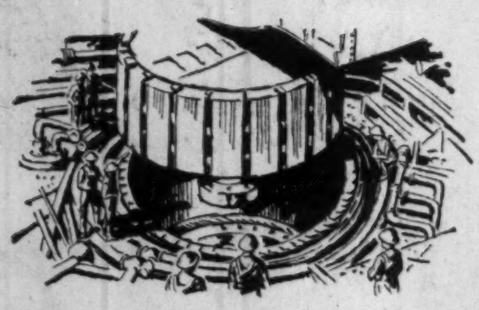
It was at this time that engineers in the Commission's Research Division were racing against time to complete verification tests on the new cable-cooling system.

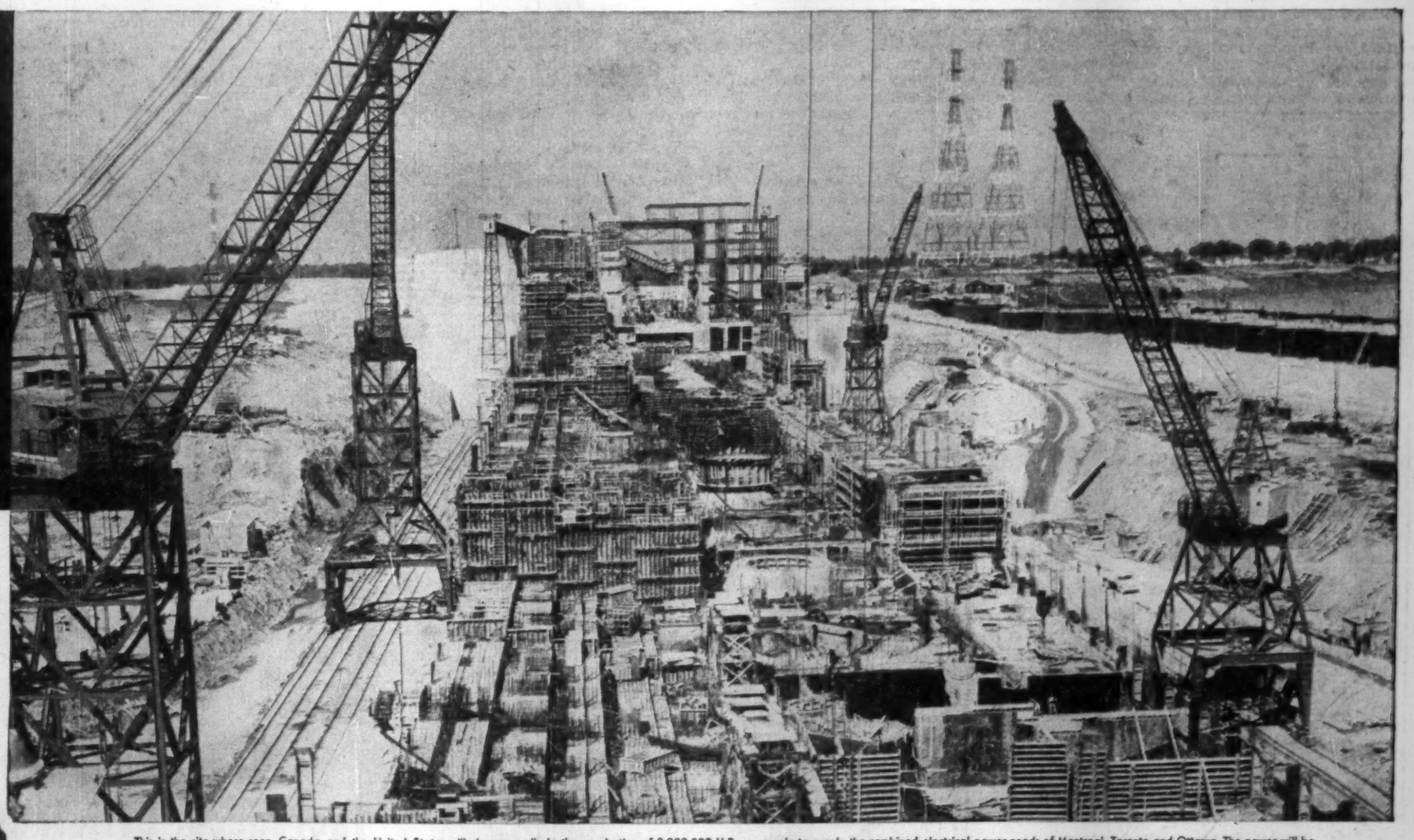
From their studies had emerged the idea of running cold water pipes beside the underground circuits to over-

(Continued on page 64)

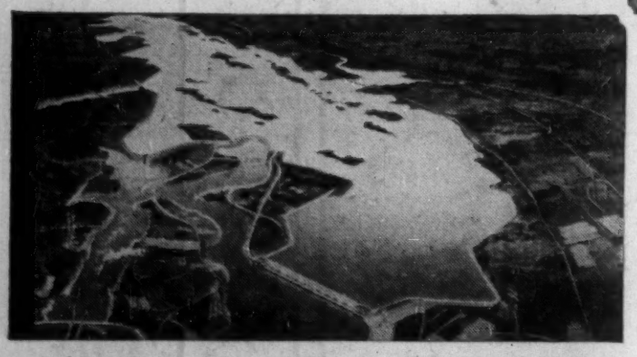








This is the site where soon, Canada and the United States will share equally in the production of 2,200,000 H.P. . . . ample to supply the combined electrical power needs of Montreal, Toronto and Ottawa. The power will be produced through the generation of 1,640,000 kilowatts, developed by 32 massive hydro-electric generators (16 on the Canadian site and 16 on the U.S. side), 24 of which will bear the familiar General Electric monogram. The powerhouses, constructed jointly by Ontario Hydro and the Power Authority of the State of New York, will extend from the Eastern tip of Barnhart Island (near Cornwall, Ont.) to the Canadian mainland.



(Top) **Here the stator** is shown ready for the piling of its laminations, of which there are over 200,000 in each machine. Weight of the stator at this stage is roughly 80,000 pounds. When finally piled with the windings assembled for shipment, the stator alone will weigh in the vicinity of 250,000 pounds.

(Second) **C.G.E. engineers** check fit of factory assembled stator, upper-bracket, coverand ventilating air housing on one of these generators, which are rated 60,000 KVA each at 13,800 volts. Each complete generator—weighing 660 tons—is then disassembled and shipped on 35 freight cars.

(Bottom) **Accurate painting** of the completed project, with the Seaway ship channel on the left. The Barnhart Island Dam and Powerhouse, is in the centre foreground. This structure, along with the Long Sault Dam (upper centre), and several miles of dyking will provide the necessary water storage area and pressure to operate the generators.

MAMMOTH G-E GENERATORS POWERED BY MIGHTY ST. LAWRENCE TO PROVIDE MORE LOW-COST ENERGY FOR ONTARIO

Much of Canada's hydro-electric power is generated in places where once, nothing existed but rivers roaring through the wilderness. But to harness such wild forces demands vision and imagination. A widespread "machine" consisting of men, manufacturing plants and construction equipment must be set in motion. The wilderness becomes a chaotic, bustling construction site . . . then, a peaceful, clean-lined power development generating needed low-cost electric power. General Electric Generators have played a major role in such projects all across the nation.

In the Cornwall area on the St. Lawrence River, where the power project is an important part of a much grander plan, this scheme of things is even more complex. Instead of replacing a wilderness, construction of the St. Lawrence Power Project means that existing towns, farms and roads must be relocated so that all of Canada may grow and prosper. This complexity created new, more difficult problems that had to be faced with clearer vision and greater boldness than ever before.

Recognized throughout the world as authorities on electric power generation, Canadian General Electric engineers were able to participate in the giant power project, to the extent that most of the generators will bear the famous G-E monogram.

Whenever you are in the market for electrical apparatus—however large or small—call the C-G-E office nearest you, or write to Apparatus Department, 107 Park Street North, Peterborough, Ontario.

GENERAL ELECTRIC GENERATORS

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Apparatus Department

CANADIAN GENERAL ELECTRIC COMPANY LIMITED

Canada's Atomic Background

(CONTINUED FROM P. 51)

fueled, heavy water-moderator, pressure vessel like the one in the first of the drawings above, was feasible.

Atomic Energy of Canada Ltd., owners of the Chalk River Project, sponsored construction of the proposed plant, which, according to the official brochure, was to serve the following purposes:

1. Demonstrate the reliable operation of a power reactor of this form, on a scale from which cost figures could be used in estimating the economics of similar full-scale power plants;

2. Provide Canadian experience and training in the design, construction and operation of nuclear power plants; and

3. Provide a focus for coordination of Canadian development work on power reactors.

In this respect, AECL is, of course, a Crown company that was formed to investigate and develop the uses of atomic energy only to the point where private enterprise could take over.

The company therefore invited leading Canadian industrial engineering companies to submit proposals for the design and construction of NPD.

New Industry

It was obvious that the company that won the contract would gain experience that would place it in a favorable position in an entirely new industry of very great potential importance.

It was therefore made clear that the one that was selected would be expected to make a sizeable contribution toward the costs of the project.

The contract eventually went to **Canadian General Electric Ltd.**, a subsidiary, of course, of the larger U.S. parent company.

From the various utilities that put forward proposals the Hydro Electric Power Commission of Ontario was selected to be the third partner in the project.

The obligations and responsibilities of the three partners were set out as follows:

- AECL would finance the reactor with all its auxiliary equipment, and would provide nuclear information and certain strategic materials. It would also finance all reactor development in excess of that contributed by CGE.
- Ontario Hydro was to provide the site and finance the conventional plant. It was also to provide the engineering drawings and specifications for the conventional plant and the station buildings and to operate the plant as part of its own system;
- CGE was to provide development, design engineering drawings and specifications for the reactor plant. It was also to contribute $2 million towards engineering and development costs of the project and was to serve as prime contractor for supply and construction of the station, including building, conventional plant and reactor plant.

It was decided that the power station should have a net output of electricity of 19 megawatts, about one quarter of the size of Calder Hall, the U.K.'s first atomic power station. New ones being constructed there now are 20 times bigger.

The site chosen for the station was located on the Ontario shore of the Ottawa river, two miles east and downstream from Ontario Hydro's Des Joachims hydro-electric generating plant, and 25 miles west of Chalk River.

AECL was to own the reactor plant, equipment and Ontario Hydro the building and conventional equipment.

Why did the plans have to be changed?

A heavy water-moderated nuclear power reactor using heavy water also as a coolant, such as NPD does—requires that the coolant operate under high pressure to prevent the water boiling.

This pressure containment, as stated above, may take the form of a large vessel surrounding the whole reactor.

Alternatively, each uranium rod assembly may be surrounded by a tube within the reactor.

If an all-enclosing pressure vessel is used it must be large and heavy, and one of its ends must be detachable to provide easy access to the internal parts of the reactor. This presents severe problems, but the structural material would be steel.

One alternative use of pressure tubes requires that these shall be made of an alloy of the metal zirconium, which has particularly good nuclear characteristics.

The physical properties and metallurgy of zirconium and, in particular, its behaviour in presence of variable temps, are much less understood than those of steel.

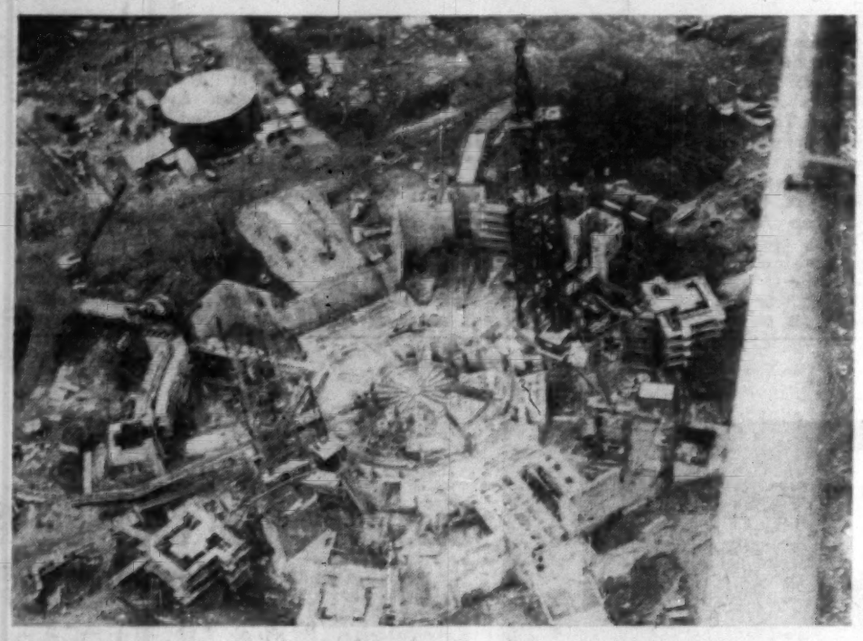
While the original studies indicated no significant difference in the cost of these two alternatives, the view of the time was that the pressure vessel would be the more reliable alternative of the two.

In the two years that followed, however, a great deal more was learned about zirconium.

It also became apparent that the pressure tube type of construction had certain advantages in larger sizes of reactor that would be necessary in economic power generating plant.

In the meantime, scientists at Chalk River had discovered very distinct advantages to be gained from arranging fuel elements in a manner that would have been impossible using the original type of pressure vessel.

These considerations decided the engineers.



AIR VIEW of the concrete foundations of one of the U. K.'s first four commercial nuclear power stations. Reactor foundation in the centre is surrounded by concrete bases for heat exchangers.

Atom Fuel Plant Planning Ahead

(CONTINUED FROM P. 53)

plant — its 100th major project.

AMF Atomics (Canada) Port Hope plant and laboratory primary objectives are:

- To manufacture fuel elements for the NRX and NRU reactors at Atomic Energy of Canada Ltd.'s Chalk River project, and other atomic installations. The 40,000 kw. NRX reactor has been operating since 1947; the 200,000 kw. NRU reactor, the world's largest nuclear research reactor, is expected to go "critical" shortly.
- To design and develop new types of fuel rods for Chalk River and other research and power reactors.
- To conduct research, development and production on research and power reactors and to undertake special assignments in the broad field of nucleonics, such as engineering, feasibility and other studies leading to production.

A statement by AMF said the new Port Hope plant would "take Canada a step further in being self-sufficient in its atomic energy program."

Uranium ore mined in Canada would be refined as before at Port Hope by Eldorado Mining & Refining.

The AECL Chalk River reactors are fueled with natural uranium, using heavy water as a moderator. Uranium metal for these reactors will be supplied in ingot form from Eldorado.

A cluster of fuel rods forms the core of the reactor, which is the source of the rays and neutrons required for nuclear research.

The uranium section of a fuel rod for Chalk River is 10 ft. long.

The NRX reactor uses 176 fuel rods, while the NRU reactor uses 200 fuel rods, each containing 120 lb. of natural uranium.

The fuel rods formerly were made by AECL at Chalk River.

An AECL official explained to **FP** that it was never part of the company's job to make fuel for reactors on a commercial basis.

"That is a job for industry."

The rough rolled material is fabricated at the AMF Atomics (Canada) Port Hope plant into fuel elements by heat treating the material, stretching, straightening, and machining it to close tolerances.

Material is then shaped at the ends, plated and sheathed in the cladding material.

This, for the Chalk River reactors, is aluminum.

Special Die

The plant will install equipment to extrude the aluminum sheath directly onto the natural uranium flats as the metal is fed through a specially designed die located in a large hydraulic press.

This will provide a metallurgical bond between the sheath and the uranium flat, thus ensuring more reliable heat transfer properties in the assembled fuel rod.

This equipment will be operating by the spring of 1958.

Initial production at Port Hope will be on natural uranium metal only, but plans are being considered for developing and fabricating rods containing fuel elements of alloys enriched with U-235, uranium oxide slugs, and sintered or ceramic fuels.

Officers of AMF Atomics (Canada) Ltd. include Gen. Walter Bedell Smith, chairman and president who has had a long and distinguished career with the U. S. military and government; Arthur V. Peterson, vice-president, former U. S. Atomic Energy Commission executive, who also served in a liaison position between the U. S. and Canada's war-time atomic energy programs; Denton Massey, general manager, a native of Toronto and former member of the Canadian Parliament; and Harrison S. Milne, works manager, who worked with AECL at Chalk River for more than 10 years.

Power in Quebec

(CONTINUED FROM P. 58)

Peninsula, other systems can take care of these additional needs, at least to some extent.

Across Canada, networks such as these last year distributed record power output of almost 82 billion kwh from central electric stations, 7.1% greater than the previous high of 1955 of almost 76.3 billion kwh.

Of this total, Quebec central electric stations produced 36.8 billion kwh, 8.6 billion kwh higher than the second largest producer Ontario with 28.2 billion kwh.

Quebec is fortunate because there are many leading power rivers of the country within its territory. The St. Maurice and Saguenay Rivers each have between 2.5 and 3 million hp potential.

In addition to a stable monthly precipitation, Quebec benefits from the accumulation throughout the winter months of about 100 in. of snow, or the equivalent of 10 in. of water. During that period, the water shed serves as a storage reservoir.

With spring, the snow melts over the entire northern Quebec area and it runs into large storage reservoirs. The approximate 1.3 billion cu. ft. of water thus impounded — equivalent to the volume of water that could be held in a reservoir 10 sq. miles and about one mile deep — helps maintain, at a much higher level than would otherwise be possible, the normal flow of all the important power rivers of Quebec.

Without these storage reservoirs, the extraordinary low revenue which came from the sale of each kwh would never be possible. The factor behind Quebec's water power will include:

- The Canadian shield with its innumerable water falls.
- A high and exceptionally stable yearly and monthly precipitation.
- A large body of fresh water.
- A policy of conservation which has been responsible for the development of the numerous storage reservoirs now to be found throughout the basins of the most important rivers of the province.

sequel:

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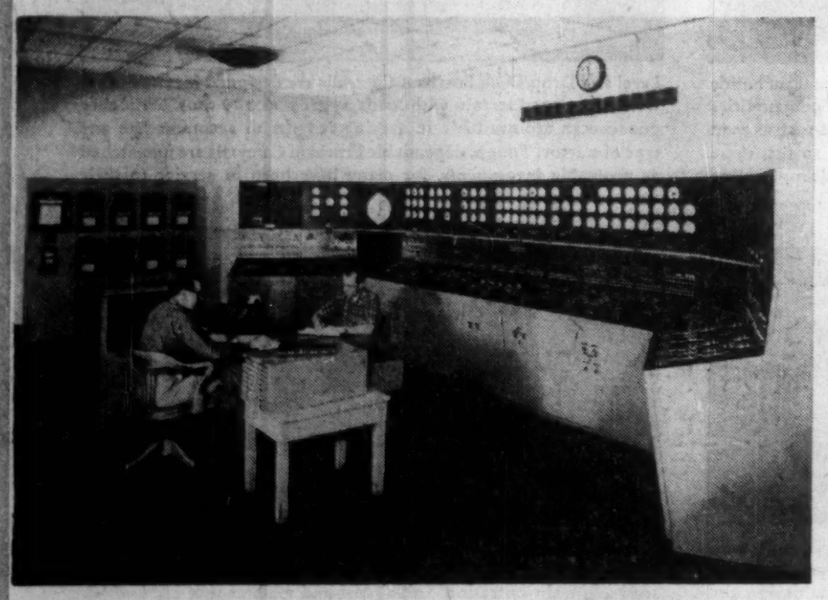

Pictured above is the central control board for the remote operation of 10 hydro electric plants. This contributes to the efficient supply of low-cost dependable power for the company's industrial and other consumers.

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A New and Exciting Era . . . with ELECTRICITY

Electricity stands always on the threshold of new and exciting possibilities. Present advances, which often seem like modern miracles, are but a prelude to future developments that will lead to better living for everyone.

Many phases of Quebec's rapidly expanding industry and economy depend upon hydro-electric power produced and distributed by Shawinigan. To meet the steadily growing demand for electricty in the area it serves, Shawinigan has a long-range expansion program, part of which is a new six-unit generating station now under construction at Rapide Beaumont.

With the addition of the new 246,200 kilowatt Rapide Beaumont station, the total installed capacity of Shawinigan's St. Maurice River system will be raised to more than 1,500,000 kilowatts.

Thus, by constantly expanding its facilities for the production and distribution of vital electric power, Shawinigan is helping to usher in the most exciting era of modern times.

CHEMICALS • ENGINEERING
The Shawinigan WATER AND POWER CO.
ELECTRIC POWER

115,000 Volts Cooled Underground by Water

(CONTINUED FROM P. 62)

come problems associated with cable operating temperatures. Power being transmitted through the cables heats them and the temperature remains high wherever the cable passes through soil with low heat conductivity. Thus, the amount of power which may be transmitted is limited by "hot spot" sections where soil conditions are resistant to the transfer of heat.

Hydro engineers found that polyethylene piping had certain advantages over metal pipe as a water carrier for this particular purpose. This type of piping is economical, flexible, easy to handle and is regarded as being virtually immune from attack by corrosion.

Four Days to Spare

The element of drama associated with the intensive activity in the Hydro "lab" was heightened by the fact that the final tests were not completed until four days before the actual cable-laying operations were scheduled to start.

From the standpoint of both economy and engineering, it was important that the installation of the cooling system be synchronized with the laying of the cables.

A total of 37 miles of polyethylene piping, made to Hydro's specifications, was required for the job.

Two polyethylene pipes, with an inside diameter of ¾-in., are laid with each set of three cables. Under roadways and the railway embankment, however, this piping was too large to fit into the asbestos-type ducts which encase the cable at these points.

As a result it was necessary to use six lengths of ½-in. polyethylene piping, two lengths being encased with one cable in each duct to provide the required cooling. Special attachments at both ends of each set of ducts connect the six lengths of the ½-in. piping to the two lengths of ¾-in. piping.

Of far-reaching significance in the power utility field, the cable-cooling method, which the commission is introducing for the first time, is expected to play an increasingly important part as time goes on, making it possible for the underground cables to transmit greater amounts of power as demands increase.

Without the cooling system, each of the four circuits now being installed is designed to transmit 140,000 kw of power at 115,000 v. This represents a total of 560,000 kw for all four circuits operating at capacity.

To attempt to transmit additional power without employing some method of cooling would cause the cables to heat up beyond the maximum safe temperature.

As a result of the new cooling system, it is expected that these four circuits combined may be able to carry something like an additional 300,000 kw when required.

Uses Mains Water

When placed in operation, the cooling system will utilize water from municipal mains.

At every 1,600 ft. to 2,000 ft., the water will be discharged into sewers and a fresh supply will flow into the piping. Experiments conducted in the commission's laboratory indicate that when the water is discharged it will be only 10 degrees warmer than when it enters the piping.

At both intake and discharge points special fittings are used. Plans now being formulated point to "automation" being applied in the operation of this new cooling system.

Thus, when the temperature of the cable rises to a certain point, the water in the piping, activated by electronic controls, would start to flow, carrying away the excess heat from the adjacent cables, thus reducing their temperature.

When the safe operating temperature has been induced, the flow of water automatically stops.

Installation of the underground transmission facilities beside the Expressway has been challenging and complex from the start. In determining a route, attention had to be given to the locations of other underground services, while many trees had to be by-passed so that the landscape would not be marred in any way. Ducts had to be installed under roadways and railway tracks so that the flow of traffic would not be interrupted.

The job of getting the cables from the Commission's Riverside Junction point on the north side of the railway tracks, under the railway embankment to the south side, was comparable to an actual mining operation.

Four tunnels had to be driven under the embankment, a distance of some 320 ft., and they had to be heavily reinforced before the cables could be placed in the concrete ducts. The latter extend through the tunnels, across the bed of the new Expressway and under the heavily-travelled Lake Shore Boulevard.

Oil, under a static head pressure of approximately 15 pounds to the square inch, is within the hollow half-inch core of the copper conductor right from the time the cable is made.

This pressure is maintained by portable equipment at all times until cable-laying and jointing operations have been completed. Thereafter, the pressure is provided by special oil tanks at suitable elevations.

A set of 12 of these tanks, one for each cable, is located at the Riverside Junction point where the overhead transmission lines from the west are connected to the underground cables through 12 potheads, each of which stands about 15 ft. above the ground. The oil tanks are located immediately above the potheads.

At the eastern termination point, at the commission's Strachan Ave. transformer station, are similar sets of potheads and oil tanks.

Owing to the variation in the contour of the cable route, it was necessary to establish intermediate sets of oil tanks.

These are located within a tall, tower-like brick structure, known as the Static Head Building, immediately east of the Navy League Building on the Lake Shore Blvd.

Major Problems

Many of the problems associated with the project were encountered in the Canadian National Exhibition grounds where, for example, a 2,500-ft. concrete roadway, extending west from the Commission's Strachan Ave. transformer station, had to be removed and replaced. In addition, engineers had to plan the cable route so that it would not interfere with trees.

Then at one part of the route in the C.N.E., it was necessary to go under the northeast corner of the Art Gallery Building. This involved considerable planning and construction, including a new concrete floor in the building.

Despite these and many other difficulties, all work within the Exhibition Grounds, which had been started on May 1 of this year, was completed one day ahead of the July 15 deadline.

In that period, 12 miles of cable, along with the cooling system, were installed in the C.N.E. section of the route.

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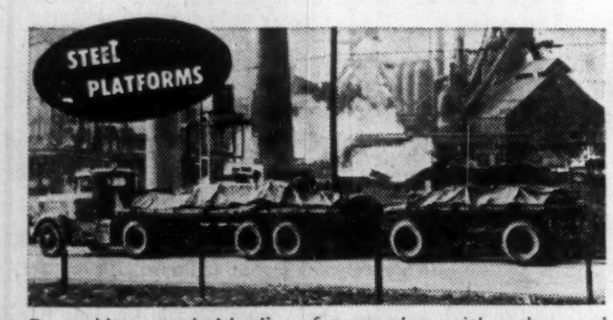
Cost-cutting Fruehauf Hopper-Type Dump Trailers are built in many styles, with capacities up to 14 cubic yards, for a variety of specialized roadbuilding materials, including sand, gravel, crushed stone, cinders, slag, bulk cement, lime, and many other aggregates and dry powdered materials. They are especially rugged and specially suited to rough terrain.

The new winchless Removable Gooseneck Fruehauf Carryall cuts unloading time of heavy cranes and shovels to less than 15 minutes—just half the time required by winch-equipped units. Uncoupling is quick and simple, and recoupling on slopes is no problem. No winch is required for units with capacities up to 50 tons—cost and upkeep are lower too.

Fruehauf has low cost used trailers that can be converted to mobile office units. These reconditioned used trailers are also ideal as equipment storage rooms on wheels, easily transported from one construction job to another. Various sizes to choose from and at prices to meet your requirements.

For the jobs that Hoist-Type Dump-Trailers do best, Fruehauf builds units with capacities ranging up to 30 cubic yards for commodities such as coal, rock and 13 cubic yards for bulk materials such as sand and gravel. Weight has been reduced and distributed so that these rugged units take maximum payload capacity to provide top hauling efficiency and profits for you.

Level and Drop-Deck Fruehauf Carryalls are designed for heavy duty work on rugged terrain with loads as great as 100 tons. Stationary goosenecks are available in varying lengths to accommodate any type of tractor. Tough, dependable Fruehauf Carryalls are unmatched as profitable investments, for many have been in service to their owners for over 30 years.



For rapid, economical hauling of structural materials such as steel for bridges, the structural steel Fruehauf Platform Trailer is realistically and ruggedly engineered. Pressed steel frame members provide strength but save weight that can be used for profitable extra pounds of payload. Square front round corners provide valuable extra loading area.

Up to 10% more bulk cement can be hauled in Fruehauf's new "Twin" screw-type Bulk Cement Trailer than in comparable transports because of its unique, weight-saving new screw design and drop-frame construction. Discharge is rapid, yet cost and upkeep are economical because material is moved by twin screws at the rear of unit, discharging 10 barrels per minute.

Part of Fruehauf's complete, money-making line of bulk cement transports are rapidly-discharging Airslide* units, adaptable to both semi and train operation. Initial cost and maintenance are low because of the mechanical simplicity—no mechanical device touches the commodity. Gravity does most of the discharge work with the aid of air blown through angled fabric panels.

*Airslide-Trademark Fuller Co.

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FRUEHAUFS SPEED CONSTRUCTION . . . CUT COSTS FOR THE CONSTRUCTION INDUSTRY

'New Light' on Niagara

Will Cost $150,000 to Look at the Falls

(CONTINUED FROM P. 50)

color are ideal for such an application as is required at Niagara.

But this also was rejected because it required about 15 kv for striking and it was felt that in the present stage of development such high voltage equipment might prove unreliable in the damp conditions at the Falls.

A Compromise

The final choice of high intensity arc was a compromise. It was decided to use 20 units, each operating at 150 amperes on 75 volts dc giving a total load, including losses in the resistive control gear, of 375 kw.

The 150-amp arc is the largest production type available. Energy distribution of the high current density arc is much better for use with color filters than the existing low current density arcs.

The type of carbon to be employed was another matter for study. With the low intensity arc presently in use at Niagara, there is no difficulty in obtaining a carbon of reasonable length to last through an evening display. But it has relatively low candlepower output.

With the high intensity arc, the rate of consumption of the positive carbon is such that replacements could be necessary several times during an evening, and this had to be avoided.

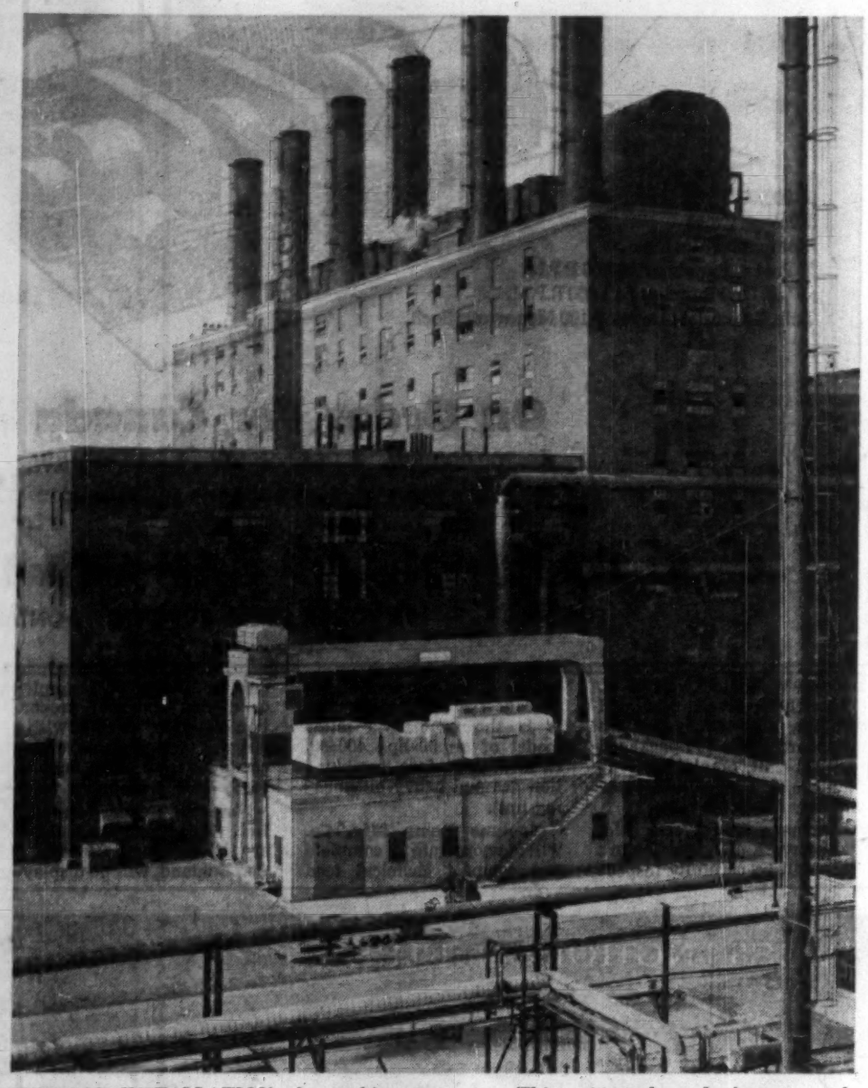
Limited space on the rotunda platform caused the rejection of plans for a barrel assembly. This allowed for a 3-ft. positive carbon which would give continuous burning for a complete evening.

The final choice was a compromise between the normal short carbon and the special 3-ft. type with an arrangement that only necessitated one re-carboning operation during an evening display.

These carbons are readily available in Canada and one replacement per display was not considered a major disadvantage because it was unlikely that changing times for all the lights would occur simultaneously.

The carbons will be 16 mm diameter, with the positive 16 in. long and the negative 12 in. long. The lamp is fitted with automatic feed and striker. The positive carbon will have a continuous burning time of one hour and the negative will last two hours.

This means that in a two-hour program, only one change of positive carbon will be required.



OUTDOOR INSTALLATION of a turbine-generator. This unit produces both steam and electric power for industrial buildings.

Then came calculation of the optical characteristics, a long and involved process that included superimposing an angular web on an enlarged photograph taken from the rotunda, and trigonometrical calculations based on the heights of known objects in the photographs.

The Color Display

A major feature of the new installation is the arrangement for color changing to provide a brilliant and kaleidoscopic play on both American and Canadian sides. It was felt that the replacement of the lighting equipment was an excellent opportunity to bring in improvements in the method of changing the colors in the lighting, and an electro-mechanical device of some sort, incorporating colored filters was envisaged.

Glass, liquids and plastics were considered for this part of the job.

First to be investigated was glass, and it was realized that this would have to be in strips to allow for the unequal thermal expansion over the large aperture of the floodlight.

Enquiries among glass manufacturing firms in England revealed that it was impossible to obtain the range of colors required by the Niagara Commission.

Even among the colors available, there was no guarantee that replacements at a later date to the same reference would be exactly the same color.

This is due to the extreme difficulty of ensuring that identical quantities of basic component chemicals are used from mix to mix.

Further factors ruling out glass as a color changing medium were excessive weight and cost.

Considerable assistance was given by **Imperial Chemical Industries** in the U.K. when plastic came in for study. But the general outcome of investigations here showed that plastic was unsuitable for this particular job because of the inherent inability of practically all forms of plastic to hold their color in the presence of heat.

There was also the tendency for plastic to soften at the temperatures likely to be experienced in front of the floodlights.

Consideration of liquids for the color changing medium was abandoned for two reasons. One was the uncertainty felt as to how such liquids would withstand the range of temperatures at the Falls, and the other was the high cost of the complicated hydraulic installation that would be required.

In this case, the investigators had in mind the possibility of liquid filters using either chemical solutions or colored oils.

The method would have been to have a reservoir for each color serving each floodlight which, in turn, would have been equipped with two narrow plate glass tanks forming the filter.

An electrically operating selection switch valve would have admitted the chosen colored liquid into one of the tanks and, at the same time, a flushing solvent into the other for cleaning purposes.

Color changing would have been effected by admitting a new color into the clean empty tank, and pumping the first liquid back into its reservoir followed by a pumping operation with a cleaning wash.

Final Choice

The final choice was made to use sheet Cinemoid which, it is understood, is substantially the same material as in use at present.

The material, it was agreed, was subject to a certain degree of fading, but information from the U.K. suppliers indicated that, since it was to be enclosed, a slightly better performance would be obtained than with that in use at the Falls just now.

One disadvantage of this material for this job, state the contractors, is due to its method of manufacture. The material is cast in a solid block and then sliced to produce the sheets which are 48 in. by 20 in. in size.

The aperture on the floodlights will be of the order of 90 cm diameter.

It will, therefore, be necessary to join two sheets of the material to obtain the required size.

But experiments by the researchers, and advice from the manufacturers, state the contractors, leave no doubt that a satisfactory job can be obtained in a simple manner.

Having decided upon the type of color changing medium, the next step was to decide upon the method by which the filters were to be brought before the floodlights. At present these are changed by hand.

Various suggestions were studied. The first was a form of concertina made of strips of color medium hinged one to the next along the edges, and arranged in a pre-determined color sequence in a container at the bottom of the floodlight opening which would be raised to a similar housing at the top.

The action of raising the string of strips would cause them to unfold in front of the floodlight, presenting an uninterrupted area of color medium in the beam as they passed through.

This idea was rejected for three reasons:

- It imposed on the Commission a fixed color program determined by the order in which the various colors were assembled in the strip pack.
- There was a potential risk of mechanical failure of the large number of hinges along the edges of the strips.
- Difficulty might be experienced in replacing faded or damaged strips within a composite strip.

Another method suggested was a form of multiple signalling shutters as used on naval searchlights. Here, a number of horizontal louvres, which normally are at right angles to the axes of the beam, are arranged to rotate axially to allow the light to pass through. In the case of application to the color change unit, the slats would have been made of color change medium and there would be successive units of different color, one in front of the other.

Also, instead of being across the beam, they would in their normal position be open, and would be brought into operation to intercept the beam by electro-mechanical means as required.

While this device gave a much greater degree of flexibility so far as the color change program was concerned, it suffered from the grave disadvantage that all the color filters were in the main heat of the beam all the time the floodlights were in operation. It was rejected for this reason.

A third idea was to have two concentric cylinders, mounted on tracks around each floodlight, separated from each other by approximately 2 in.

Each cylinder would be divided into six panels, five to carry color medium, and the sixth left open. By having the open space of, say, the inner cylinder, opposite the floodlight aperture, it would be possible to rotate electrically the outer cylinder bringing its five colors successively into register in front of the floodlight, and then to repeat the operation leaving the open frame of the outer cylinder and moving the inner cylinder to the selected color.

The difficulty associated with this method was that of rendering the entire unit weatherproof, and the inconvenience it would impose in gaining access to the floodlight barrels for servicing purposes.

Brief consideration was also given to an enlarged version of the standard rotating disc arrangement used on small projectors for theatrical work, but questions of windage and available space ruled this out.

Still another suggestion was to use a continuous strip of Cinemoid made up of sheets of different color cemented together which would be passed in front of the floodlight by unrolling it from a roller at the top on to one at the bottom.

This seemed to be one of the most promising ideas and considerable research was carried out by the laboratories in connection with it.

In conjunction with **Strand Electric Co.** who manufacture the sheet, a suitable cement was evolved for joining the sheets together and a special tool was devised at the laboratories for the speedy carrying out of the cementing operation.

Temperature tests were carried out on a join between two widely dissimilar colored sheets to check that there was no appreciable differential expansion which might spring the sheets apart. A sheet was exposed to excessive heat for 45 minutes to check for buckling and embrittlement.

Thought was given to fixing metallic contacts at the edge of the strip which would be used to ensure accurate registry of individual colors with respect to the floodlight aperture. An experimental model of the unit was actually constructed at the laboratories.

But the idea was abandoned due to the difficulty of obtaining simply a variable speed drive to compensate for the varying diameter of the top and bottom rollers, as the strip passes from one to the other. Another drawback was the inflexibility of program sequence.

How It Works

The method to be used for the color changing comprises a rectangular housing approximately twice the height of the searchlight barrel which is attached to the front of the floodlight.

It houses five flat, vertically-mounted, counter-balanced color frames which are brought into operation, either singly or in combination, by means of small electric motors. The lower half of the unit is glazed on both sides with armor plate or toughened glass to provide heat and weather protection to the filters.

Detailed calculations have been made by the laboratories on the heat which will impinge on the filters, and, with the inclusion of a suitable air blower, the temperature rise on the deepest blue filter will be well within the limits advised by the filter manufacturers.

The color change mechanism is a self-contained unit which can be removed and wheeled away for servicing as required. This provision has been made so that vertical displays with white light can be produced on the few occasions throughout the year when this is necessary.

The unit can be used in conjunction with the floodlights over limited angles of elevation without impairing its operational efficiency.

The lamp housing will be made of Birmabright alloy, selected because it was felt there would be very little difference in cost between it and sheet metal if the additional expense of rendering the sheet metal weather resistant was taken into account. It and the color change units will be supplied in natural metallic finish but will be painted to blend with surroundings if necessary.

90 cm Mirrors

Mirrors will be 90 cm diameter, back silvered Boro Silicate parabolic. The rear surface will be copper plated lead sheathed.

A ¼-hp motor and 6 in. diameter rotor will provide the scavenging and cooling for the lamp house.

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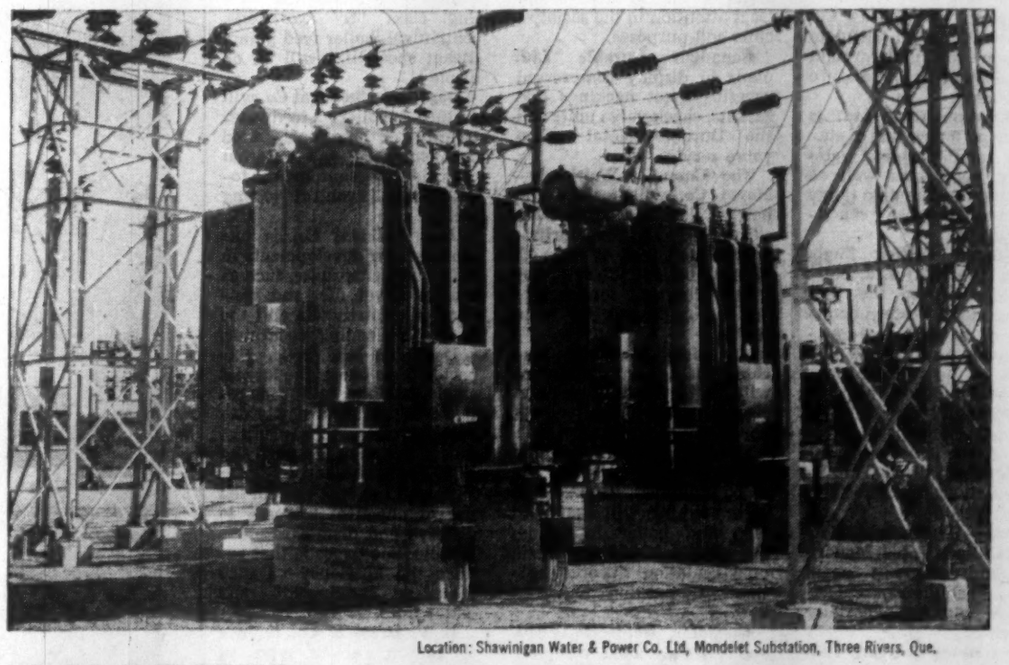


Location: Shawinigan Water & Power Co. Ltd, Mondelet Substation, Three Rivers, Que.

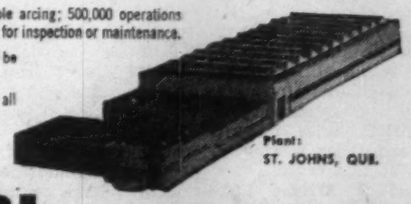
ANOTHER JANSEN LOAD TAPCHANGER INSTALLATION BY BROWN BOVERI

Jansen Automatic Load Tapchanging
Power Transformers installed on the Shawinigan System

Pictured above are Brown Boveri Transformers, 7500 KVA, Type ONS, H.V. 66000 volts delta/L.V. 12470 volts star fitted with Jansen Load Tapchangers Type DIII, 800 amps; they operate in parallel, and provide automatic ± 10% voltage regulation in 16 steps.

Why Jansen Load Tapchangers?

- The Jansen principle of rapid spring-actuated load transfer permits only negligible arcing; 500,000 operations without contact replacement. Load transfer switch is completely and easily withdrawn for inspection or maintenance.
- Load transfer switch is located in separate oil chamber. Contaminated oil, which can be drained off under load, is automatically replenished from conservator.
- Jansen has thirty years of excellent performance in many parts of the world, under all types of load and service conditions.



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FP-7-4

Power Equipment

The power field is one where Canada is of particular interest as a major market to world suppliers. That interest will be more than emphasized this year when the annual Power Show opens next week in the new Queen Elizabeth Building on the Canadian National Exhibition Grounds, Toronto.

Sponsors of the event state it will be the greatest concentration of engineers and the largest exhibition of power plant equipment ever gathered together in Canada.

With contracts for new power projects across the country piling up and many others on the prospective list, manufacturers and distributors of power equipment in all its phases from across Canada, and from the U. K., the U. S. and other countries have come forward with their best and latest.

But apart from the range of equipment on view, several important events are running concurrently with the show. Among them:

- The annual convention of the Institute of Power Engineers for which executive engineers from every part of Canada are expected to gather to evaluate present progress and plan the future for what is claimed to be Canada's fastest-growing technical society.
- An engineering-management seminar which will give participants the chance to hear experts from the Research Institute of America discuss more engineering at less cost.
- Cleaner Air Week, a campaign which aims at eliminating air pollution. It is being packed by a publicity program to focus public attention on better air.

AUTOMATIC CONTROL DAM is part of the $12 million remedial program above Niagara Falls. It controls the water level in the Grass Island pool, feeding power stations on the Canadian side of the river.

American Society of Heating and Air Conditioning Engineers will have members of the Ontario Chapter on hand to answer questions about their organization. A portion of the exhibit shown at Chicago last February will be on display.

Affiliated Engineering Corporations Ltd. plans to have an interesting exhibit on steam plant equipment.

Albion Asbestos Packings Ltd. will have a display of products and will also present the first catalogue.

American Gilsonite Co. Demonstrations of Gilsulate insulation for underground hot pipes will be the feature at this booth.

S. A. Armstrong Ltd. is introducing a new line of stationary and portable self-priming pumps, as well as exhibiting the complete range of general-purpose centrifugal pumps.

Associated British Engineering (Canada) Ltd. state that this will be the first showing in the western hemisphere of a CS75 free-gasifier power unit developing 350 hp. at the turbine shaft. The company will also be showing other products of associated companies.

The Atlas Asbestos Company Ltd. will display asbestos insulations from rock to finished products.

Babcock-Wilcox and Goldie-McCulloch Ltd. Modern trends and designs in steam generating equipment and accessories will be pictorially represented.

Bailey Meter Company Ltd. A working model of an automatic combustion control system as applied gas- and oil-fired boilers, and a new, portable gas analyser, the Bailey Heat Prover, will be featured at this exhibit.

Baker Instruments Ltd. plans to have an activated display of a Barton flow controller coupled to a conoflow control valve.

Bawden Industries Ltd. will be displaying Weinmann Canada pumps including one of the horizontally split case double ball bearing end suction pumps and one of the small, close-coupled end suction series.

W. C. Becker Equipment Co. A self-contained, versatile 40KW diesel generator set manufactured by this company and comprising a General Motor series 71 diesel engine and Delco alternator will be at this exhibit.

Bennett & Wright Ltd. This exhibit will feature the complete line of Denso anti-corrosion materials from basic, cold-applied Denso tape to bituminous Denso Therm tapes, which are used on hot water and steam lines.

Bestobell (Canada) Ltd. will feature a glandless float switch, the Mobrey magnetic level switch, which functions through an arrangement of magnets.

The Bird-Archer Co. expects to feature a full-size working model automatic cold-process water-treating unit, complete in every respect exactly as it would be installed in a boiler plant.

Bituminous Coal Institute of Canada Ltd. Member companies of BCI on an industry-wide basis will provide salesmen to man this booth and provide information on the institute.

Brooks Rotameter Co. will feature the company's complete line of variable area flow meters.

A. M. Byers Co. Colored photographs depicting the steps in manufacturing wrought iron. Those in attendance may guess the service life of a section of wrought iron pipe—$100 first prize, $25 second prize.

Canadian Boiler Society will have a prestige-type booth, displaying the symbol of the society in order to attract attention to the society's aims and purposes.

Canadian Durable Ltd. plans to display compressed asbestos sheet packings and gaskets, check valve units and the Durable metal pump valve service.

The Canadian Fairbanks-Morse Co. will feature the newly designed Hydroflex steam trap by **Strong, Carlisle & Hammon**, and **Thomas C. Wilson** boiler tube equipment, featuring torque airmatic air control for tube rolling.

Canadian Hoffman Machinery Co. primary feature will be heavy-duty vacuum cleaning equipment, both portable and stationary.

Canadian Johns-Manville Co. Two major products are to be exhibited. One section of the exhibit will deal with pipe and boiler insulation, including J-M 85% magnesia pipe insulation; the other section with packings and gaskets.

Canadian Refractories Ltd. and its associated company in the contracting field **Canadian Refractories Construction Ltd.**, will have a combined booth.

A. W. Cash Co. and its subsidiary, **Cash Standard Stacon Corp.**, will exhibit Cash Standard automatic regulators, pressure and temperature indicating and recording controllers, and temperature regulators.

Chester Sales Ltd., the Canadian distributor of Packard Water Conditioner will have on hand a trained staff of qualified engineers to discuss the water conditioner.

T. C. Chown Ltd. will exhibit equipment that bears a direct relation to Cleaner Air Week. As Canadian affiliate of **The Thermix Corp.**, this company will devote two booths to the display of mechanical fly ash collector models, sections of electrostatic precipitators, and automatic voltage control equipment. A third booth will have an operating model of a Peabody wet gas scrubber.

Combustion Engineering-Superheater Ltd. will feature an animated scene-in-action view of one of the two units the company is currently supplying for the **Hydro-Electric Power Commission of Ontario's** Richard L. Hearn Station.

Combustion & Power Equipment Ltd. will exhibit the Peabody PK-54 automatic oil and gas burner unit, the Peabody model HT register, the Enterprise pressurized rotary burner package, and combustion & power type CP oil pumping and heating sets.

Combustion Utilities Corp. will feature two methods to prevent accumulation of sludge deposits and to overcome bottom tank settlings that have already accumulated in oil storage tanks.

Consolidated Engines & Machinery Co. will feature Milton Roy controlled volume pumps and automatic chemical feed systems.

Crane plans to feature a six-inch pressure seal, bonnet cast, steel gate valve and a six-inch electric motor-operated gate valve with push-button control, quarter-sectioned.

Darling Brothers, Ltd. This exhibit will include the Darling class "D" two-stage, centrifugal, boiler feed pump. Steam specialties will be on display.

Dearborn Chemical Co. will feature boiler feedwater treatment chemicals, and chemical feed and external conditioning equipment, together with control testing methods.

The De Laval Co. is exhibiting new developments in industrial centrifuges, such as the De Laval fuel and residual oil centrifugals and the new self-cleaning separator.

Dominion Bridge Co. Expected to be one of the largest single exhibits at the show, this will feature a newly developed water tube package unit boiler with a capacity of 12,000 pph. at 200 psi.

Dowell Inc. will explain the use of chemical solvents to dissolve and disintegrate the troublesome deposits that reduce the efficiency of such industrial equipment and water lines.

E. F. Drew & Co. intends to exhibit various types of boiler water treatment, cooling water treatment, corrosion inhibitors, and also literature describing the Drew system of water treatment.

Electronics Corp. of America (Canada) will show Fireeye integrated, prewired safety interlock flame failure systems for power boilers, designed for use with single or multiple burners burning gas, oil or pulverized coal.

Emco Ltd. (the new company name adopted this year by **Empire Brass Manufacturing Co.**) will display the wide range of gas equipment and standard power piping products that are distributed by the company throughout Canada.

Mason-Neilan Regulator Co. plans to exhibit the complete line of industrial process controls and systems, including both indicating and recording control instruments for level temperature, flow, and pressure, control valves, regulators and accessories.

McDonnell & Miller Inc. will have on display cutaway models of their most popular products.

McRae Engineering Equipment Ltd. will emphasize Reliance water columns and Eye-Hye remote water level indicators.

Noel Moffitt Co. What is described as the world's first "packaged remote control system" will be in operation at this exhibit. It incorporates a W. S. Rockwell 20-in. butterfly valve, regulated from a distance by a Cash Standard series 300 packaged control unit, employing continuous d-c signalling techniques.

Napanee Iron Works Ltd. will have a standard feature that will be carefully inspected by those considering an average-size packaged unit. It is the company's latest model of an 80-hp., 400-sq. ft. heating surface, combination gas and heavy oil burning unit.

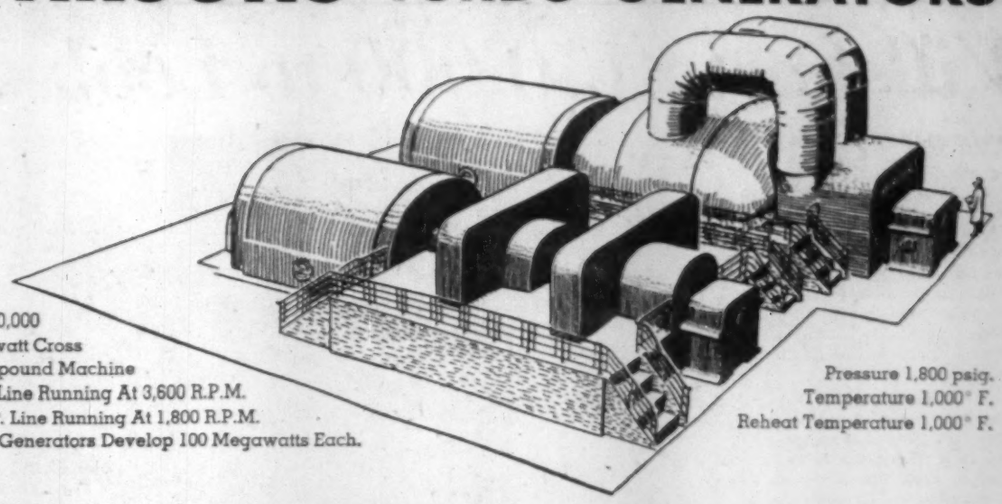
Neptune Pump Mfg. Co. will demonstrate a complete and compact chemical feed unit, consisting of a simplex or duplex chemical proportioning pump, together with a 50-gal. tank and mixer all combined into one complete, ready-to-operate unit.

Newman, Hender (Canada) Ltd. This Canadian subsidiary of **Newman, Hender & Co.**, England, will be displaying various valves, with the emphasis on the company's specialty — oilfield, refinery and industrial valves.

Nicol & Andrew Ltd. will exhibit "Master-Hone" internal and external grinding and honing equipment designed for the heavy engi-

(Continued on page 67)

PARSONS TURBO-GENERATORS



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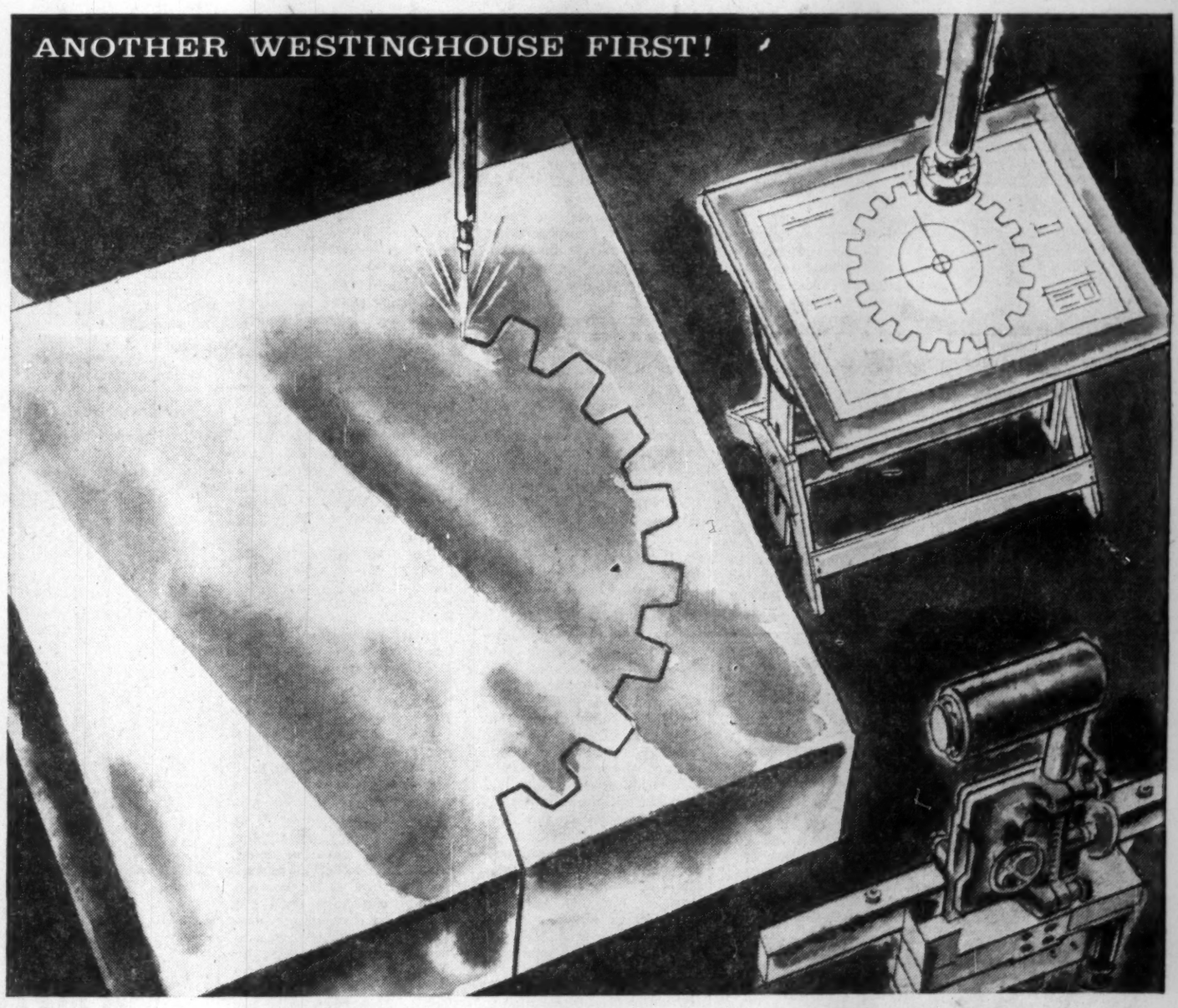

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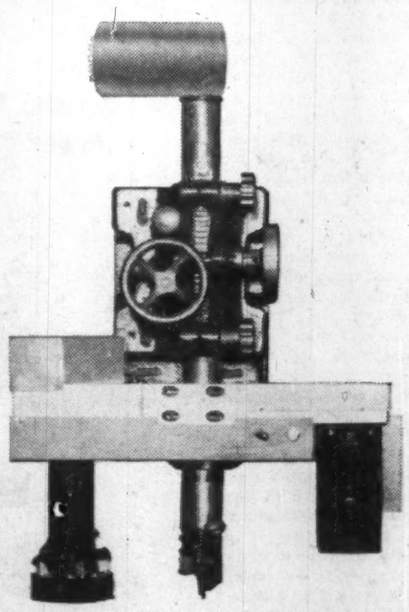

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You can use the Westinghouse LINATROL with all gas cutting machines equipped with a motor driven tracing wheel. When you do, you'll start saving money, time and material . . . and benefit from increased accuracy and efficiency.

We'll be pleased to send information about LINATROL and actively cooperate by surveying your gas cutting equipment. Write to: Electronics Division, Canadian Westinghouse Company Limited, Hamilton, Canada.

WATCH WESTINGHOUSE ELECTRONICS

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Power Equipment

(CONTINUED FROM P. 66)

neering industry in both production and repairs.

Ontario Hydro Electric Power Commission will be showing its famous models of the St. Lawrence Power Project and of a typical nuclear-electric plant.

Ontor Ltd. This leading Canadian distributor of industrial combustion controls and ancillary equipment will be exhibiting many items from various manufacturers.

Peacock Brothers Ltd. plans a large exhibit of power plant equipment. Much of the equipment on display is destined for installation in Canada immediately after the Show.

Penberthy Injector Ltd. A complete range of brass valves will be included in an eye-catching display that will allow close inspection of the items and their component parts.

Pittsburgh Corning Corp. will feature Foamglass insulation, a multicellular glass insulant with high compressive strength that is impervious to water and water vapor.

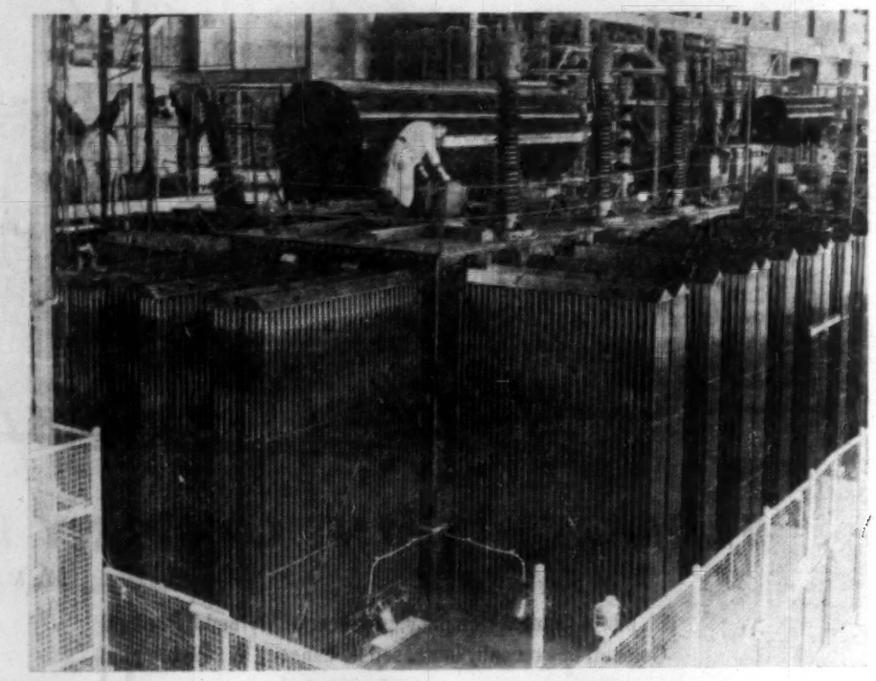
The Powers Regulator Co. of Canada placing special emphasis on hospital hydrotherapy equipment and photographic development equipment, will have display panels showing these items.

Pumps & Softeners, Ltd. can answer your questions about individual water treatment equipment.

Revell and Co. (Canada) will exhibit the company's range of single and two-stage compressors.

Refractories Engineering & Supplies Ltd. This company will display the products of six major refractory producers as well as those from an additional nine associates.

Republic Flow Meters Canada Ltd. will be exhibiting its boiler meter with electrically transmitted records of steam output, or gas input, coincident with air input and including the only continuous count-up flow integrator.



LARGEST POWER TRANSFORMER built in Canada: Under test at Guelph, Ont.

Ruston & Hornsby Ltd. plan an exhibit dealing with diesel engines, marine, stationary and locomotive; gas turbines; narrow-gauge diesel locomotives for underground mining.

Sarco (Canada) Ltd. will be showing a complete line of steam traps, strainers and temperature regulators, with special emphasis on the new thermo-dynamic trap.

B. F. Sturtevant Co. of Canada, a subsidiary of **Canadian Westinghouse Ltd.,** plans to have an exhibit featuring the precipitron electrostatic air cleaner (to be used in connection with Cleaner Air Week).

Taylor Engineering & Construction Co. plans to exhibit soot blower equipment by the Copes-Vulcan division of **Blaw-Know.**

Tewes Engineering Sales Co. An actual short boiler shell for a three-pass Scotch boiler, cutaway and attractively colored to show various features, will be the focal point of this exhibit.

Thermidaire Corp. will be showing automatic electric defrosting equipment for commercial refrigeration, drum warming units, etc.

Toronto Engine Works Ltd. Internal, external and lathe model "Master Hones" for reconditioning defective bearings in location are to be demonstrated.

H. O. Trerice Co. will be exhibiting industrial and dial thermometers, air-operated controls, temperature regulators, bucket traps, recording instruments, pressure regulators and gauges.

Trion (Canada) Ltd. This subsidiary of **Trion Inc.,** McKees Rocks, Pa., designers and manufacturers of electronic equipment for cleaning and purification of air or other gases, is now making Trion equipment in Canada and will exhibit electronic air cleaners for residential, commercial, institutional and industrial applications.

Vapor Heating (Canada) Ltd. is introducing the "Modulatic" line of package-type boilers with a display of the 160 bhp combination gas- and oil-fired unit.

Velan Engineering Ltd. intends to exhibit Universal steam traps, in cut-away form, together with a new float and thermostatic steam trap for unit heater, air coil and processing applications.

A. E. Watts Ltd. will feature an oil-fired steam generator unit, and forced-draft rotary burner for pressure firing sealed boilers.

Laurie & Lamb. Centre of attraction at this exhibit will be an instructional steam turbine that comprises part of a complete plant with condenser, used for educational purposes.

Yarnall-Waring will exhibit the company line of steam power plant equipment.

Manning, Maxwell & Moore of Canada, Ltd. The "C.A.H." division products on display will include Ashcroft pressure gauges, American industrial thermometers and temperature regulators, etc.

Martin Brothers will feature the new Rayscot steam generator, which is made with built-in, factory-assembled, power-operated automatic damper controls.

Farr Co. Manufacturing. This manufacturer of air filters will emphasize features of the Roll-Kleen dry, automatic-type filter.

Ferro Metal Ltd. Steel, galvanized and copperlined tanks and pressure vessels will be on display.

Fischer & Porter (Canada) Ltd. Instruments for process control, chlorination equipment, and data logging equipment, proprietary items of the company, will be on display.

Flexonics Corp. of Canada will show a complete line of flexible metal hose and assemblies, brass and stainless steel bellows, etc.

Foster Engineering Co. is featuring the new Foster Isoforce control and the Gentile flow tube.

Foster Wheeler Ltd. In the central portion of this display will be an animated cross-section, in color, of one of the 600,000 lb. per hour pulverized, coal-fired steam generating units being furnished to the new South Saskatoon Generating Station.

The Garlock Packing Co. will exhibit a limited selection of its complete line.

General Controls Co. (Canadian) manufacturer of a complete line of thermostats and related controls, will display a boiler front model with the complete line of controls.

W. S. Gerrie and Associates Ltd. will exhibit the Killark line of explosion-proof and vapor-proof fittings, conduit fittings, test outfits, troughing for power cables, safety devices and other products.

A. P. Green Fire Brick Co. will centre its exhibit around the fact that in Canada, the company represents a complete refractory service.

Grinnell Co. of Canada proposes to display highlights of its own manufactured products as well as various makes of valves covering all fluid pressures and temperature ratings.

Hagan Corp. (Canada) will present components for automatic control and instrumentation systems.

F. S. B. Heward & Co. A Diamond model IK-300 electric motor-driven, long-retracting soot blower, available for travels up to 24 ft. will be displayed.

The Harwell Co. plans to include working models in its exhibit.

Ion Exchange (Canada) Ltd. has been operating in Canada for two years, and engaged during that time in completing contracts for the design and supply of equipment, now being installed, for the extraction of uranium from leaching liquors. It is backed by a British parent organization.

Jenkins Bros., Ltd. will display a complete line of bronze-iron, stainless steel and cast steel valves.

Kent-Norlantic Ltd. Featured attraction will be a working model of the single-point Commander class electronic temperature recorder and indicator known as the KE. This will be the first display of this instrument in Canada.

Ladish Co. of Canada will feature representative examples of new and unusual fittings used in conventional and nuclear power piping applications. Included will be samples of the company's complete line of controlled quality pipe fittings. The exhibit will make effective use of illuminated transparencies to depict the modern laboratory and manufacturing facilities.

Lytile Engineering Specialties Ltd. A working display illustrating the difference in pressure drop between two Edward check valves — one fitted with an equalizer and the other without — will be the feature at this exhibit.

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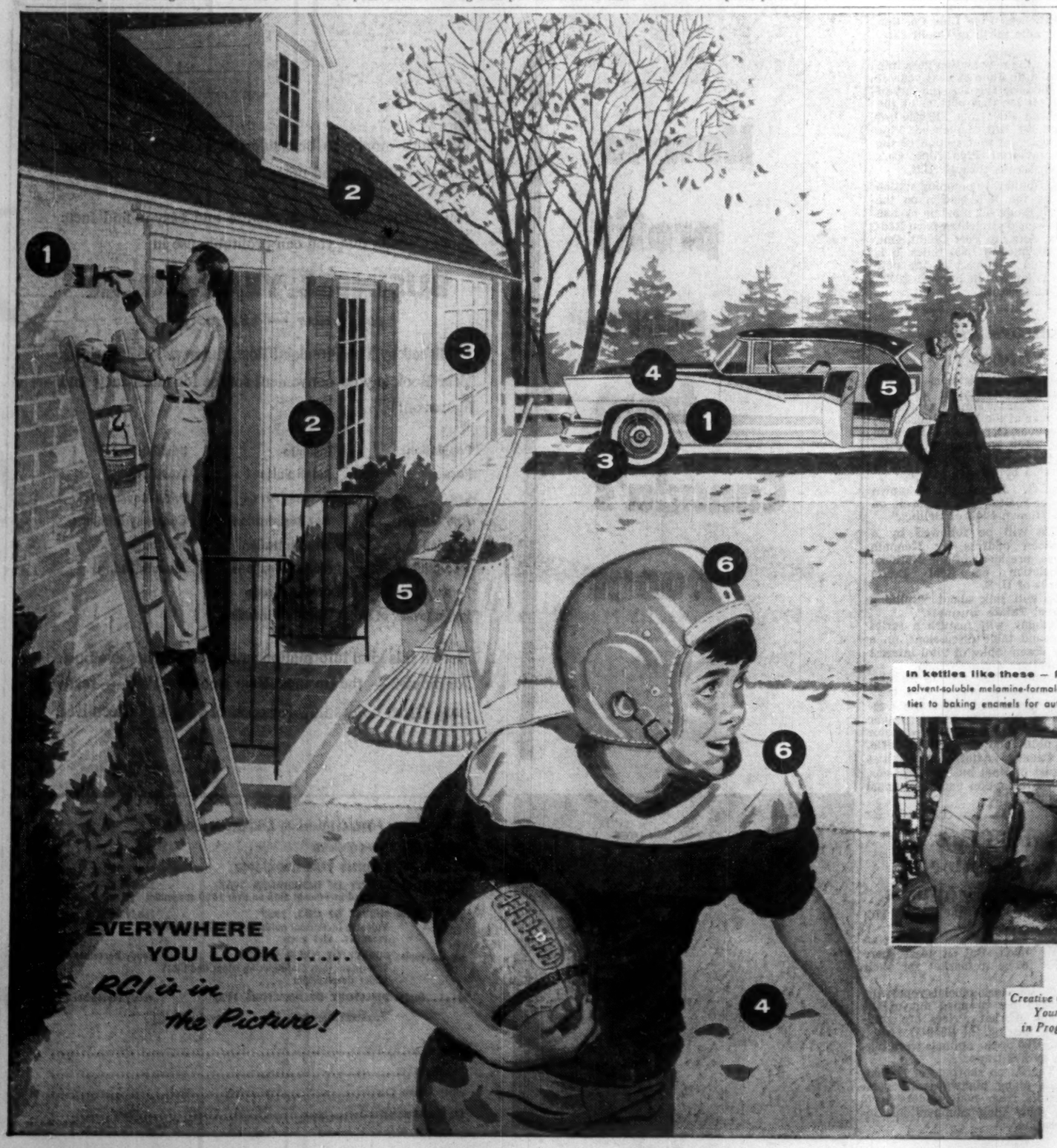

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important applications of RCI products

1 **RCI surface coating resins** – for durable exterior masonry paints Reichhold offers polyvinyl acetate emulsions with superior low temperature coalescence. For finer metal finishes RCI has recently introduced a *new* melamine-formaldehyde resin that produces high solids enamels with optimum gloss and hardness.

2 **RCI chemical colors** – lend brightness to asphalt shingles (via granule coating) . . . help give lasting beauty to many enamels and trim paints.

3 **RCI phenol-formaldehyde resins** – find major uses in strong water-resistant adhesives for exterior fir plywood and in durable auto brake linings.

4 **RCI phenol** – whether you make weed killers or use phenol in manufacturing engine oil additives, Reichhold can make fast delivery via drum or tank car wherever your plant is located.

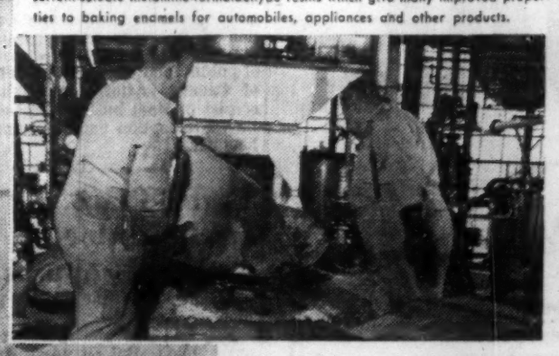
5 **RCI plasticizers** – play a major role in the performance of many vinyls, including those used for auto upholstery and seat covers. (Incidentally, as shown in our illustration, a "retired" vinyl shower curtain can be sewn up into a fine big bag for jobs like collecting leaves.)

6 **RCI polyester resins** – combine with diisocyanate to produce polyurethane foams which are currently being tried out for many types of padding such as that required in sports equipment. Other RCI polyester resins provide the sturdy lightweight protection expected of modern football helmets.

Which of these materials do you need?

The next time you have a supply problem (or a technical problem) take a look at RCI. See where fast delivery of these quality-controlled RCI materials (and the additional ones listed with our signature) can help *you*.

In kettles like these – RCI is now producing its new line of aromatic solvent-soluble melamine-formaldehyde resins which give many improved properties to baking enamels for automobiles, appliances and other products.



Auto manufacturers – will find "high solids" enamels made with the new RCI melamine-formaldehyde resins give optimum gloss and hardness with a minimum number of spray coats.

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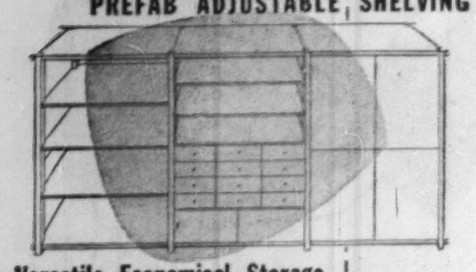

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Hospital Scheme Cost Worries Manitoba, Sales Tax Feared

From Our Own Correspondent

WINNIPEG—Manitoba hopes it can enter the proposed national hospital insurance plan without being forced to levy a retail sales tax.

There will be no sales tax if Premier Campbell can avoid it.

Whether or not he can will depend on whether more money will be forthcoming under the tax agreements and how much; whether Ottawa can be induced to accept changes in the plan to meet special conditions in Manitoba; and how much can be raised toward cost of the scheme by what Mr. Campbell terms "fiscal measures at the provincial level."

Possibility of a sales tax has brought strong protests from Manitoba Division of Retail Merchants' Association of Canada.

In an Oct. 1 letter to its president Mr. Campbell said measures now being considered "may make it possible to finance a hospital insurance plan without imposition of a retail sales tax."

"Fiscal measures on the provincial level," a term Mr. Campbell uses in his letter, could mean some other form of tax although this is not likely.

More probably it means an individual or family premium, and some form of deterrent to discourage unnecessary hospital service, such as a deductible provision which would make persons responsible for the first instalment of their hospital bills incurred during the year.

This kind of provision would operate the same way as the deductible provision in auto collision insurance.

The limit on this type of deterrent is probably subject to agreement with Ottawa. The federal legislation allows leeway for "authorized charges" against those who benefit from the hospital plan.

But how high they could be fixed and still allow the province to come within scope of the plan is a point on which the Manitoba government is not clear.

In any case this province doesn't intend to follow the lead of Saskatchewan, which pays all hospital bills.

The province hopes to get more money from larger federal payments under the tax sharing agreements. For the present there is nothing definite on this.

Premier Campbell has made plain Manitoba will enter the national hospital plan when it is accepted by a majority of the provinces representing a majority of the population. The question is in what form and how it is going to be paid for.

Its economic consultants have advised that Manitoba's 50% share of an over-all plan, without effective curbs on it, would in time absorb practically all provincial revenues.

Figures cited in a book "Underwriting Canadian Health" have sounded a warning to be careful. (FP, Aug. 17) The book was prepared by **William Lougheed Associates**, Toronto, for the Canadian Chamber of Commerce and the Canadian Life Insurance Officers' Association. The authors are also chief consultants for the Manitoba government on the economic aspects of health insurance.

Assuming Manitoba maintains its present percentage of Canada's population and health costs, a breakdown applicable to this province indicates that by 1960 a wide-open hospital plan would cost $27.5 million of which the province's half share would be $13.75 million plus administration costs of $1.37 million, a total of $15.12 million.

By 1965 Manitoba's share, using figures in the book as basis of computation, might be $33.25 million including administration costs; by 1970 about $51.45 million and by 1975 they might be $87.75 million, far more than present annual revenues.

In face of these estimates, the government, even though about to enter the plan, is looking for assurance that costs won't get out of hand.

Demand Firms For Aluminum

MONTREAL (Staff)—With the Arvida strike ended and threat of trouble at Kitimat side-stepped just in time, **Aluminium Ltd.** this week buckled down to the business of selling aluminum.

Increasing production capacity in recent months has been softening the market. In this atmosphere, Aluminium Ltd. has launched a major new sales effort.

A company spokesman said:

"About one third of the company's Canadian production is supplied to the U. S., where the company feels confident that its sales can be maintained due to its established position as an ingot supplier to fabricators, as well as its role of a long-term contract ingot supplier to important segments of the industry.

"After a sharp decline earlier this year in sales to the British market, demand appears to be firming. Shipments in other overseas markets have been well sustained."

Company sales tonnage this year to date is some 10% down from last year. This year's loss of production from the company's more profitable plants, combined with unusual costs stemming from the Arvida strike, have caused a sharp drop in third-quarter earnings, company states.

New Pump Station Boosts Capacity Of Oil Pipeline

Construction of a new booster pumping station is under way on the **Lakehead Pipe Line Co.** line a half mile north of Gould City, Mich.

When the new station goes into operation in June of next year, it will increase the through-put of crude oil for that portion of the Lakehead line from 212,000 b/d to 234,000 b/d. Lakehead Pipe Line operates that section of the **Interprovincial Pipe Line Co.'s** line that runs through U.S.

The Gould City pumping station will be the 18th station on the longest crude oil pipeline system in the world stretching from Redwater, Alta., to Port Credit, Ont. — a distance of 1,931 miles. It is estimated total cost of the new installation will be between $800,000 and $900,000.

Realtors Meet In Vancouver

Advance registration for the Canadian Association of Real Estate Board's annual session — this year at the Hotel Vancouver, Vancouver, Oct. 19-23 — has been very heavy. Nearly 350 delegates and 150 ladies have signified their intention of being present.

S. G. Russell, well-known Denver realtor, will elaborate on the "Human Side of Selling."

This will be followed by a luncheon address by Kenneth Keyes, president of the National Association of Real Estate Boards of U. S.

He will talk about "Building a Real Estate Business."

Tuesday will feature a series of round table discussions, on a half dozen topics of vital interest to realtors and salesmen.

Round tables continue Wednesday morning, preceding a business session which includes election of officers. Luncheon speaker will be George Vincent, director of public relations, **Aluminum Co. of Canada.** Afternoon activities consist of final business sessions, then a reception and the annual banquet.

Skunk Pelts In Bad Odor Among Trappers

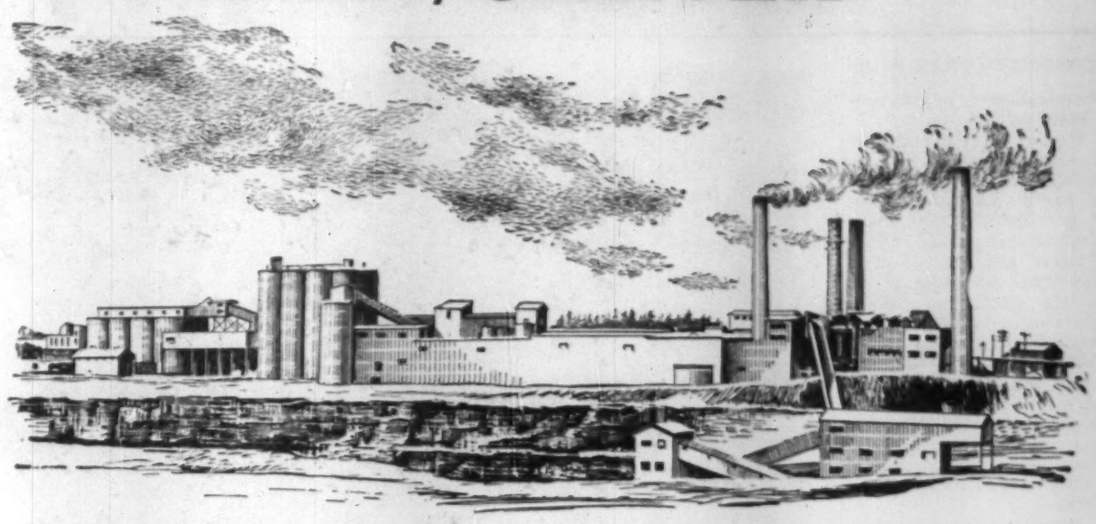
Nobody likes the skunk any more.

Not that any one ever did — very much. But at least there used to be a market for their skins.

Now Ontario officials report the bottom has dropped out of the skunk market. Prices are skidding. During the 1956-57 season only 120 of the animals were taken by five trappers.

There's no shortage of skunks. Kills along highways and complaints from householders seem to show their numbers are increasing.

construction by CARTER



ST. MARYS CEMENT COMPANY LIMITED

ST. MARYS, ONTARIO

St. Marys Cement Company, producer of 'Pyramid' Portland Cement, has recently increased its capacity by 25% bringing its production up to 12,000,000 bags of cement a year!

This greater capacity was made possible by the enlargement of the raw grinding building and the wash mill, a new pack house and eight storage silos, plus the revamping of coal handling and clinker facilities. These additions were built by Carter.

The true measure of a company's worth is a satisfied client. St. Marys Cement Company Limited has been a Carter client for over 20 years.

Engineers, F. L. Smidth and Company, New York, N.Y.

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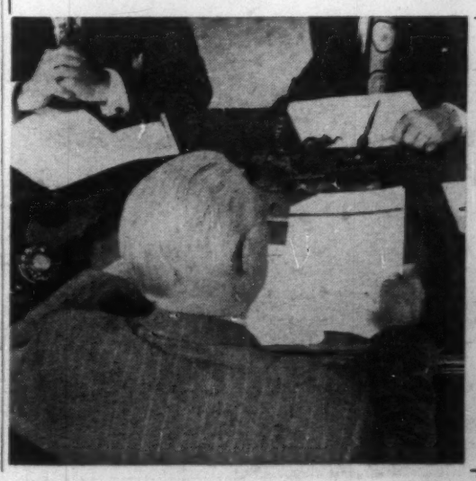

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Manitoba Plans Exchange Securities Data With N. Y.

From Our Own Correspondent

WINNIPEG — The Province of Manitoba has agreed to co-operate with the State of New York in a crack-down on sale of dubious stocks and a more efficient policing of the securities business.

At the annual conference here Oct. 2-3 of administrators of Provincial Securities Acts, Louis J. Lefkowitz, attorney-general of the State of New York said residents of his state were being victimized by groups of unscrupulous promoters from Canada for an estimated $50 million a year.

Some of the operators were Americans taking advantage of a friendly neighbor.

In a limited way, Manitoba has a need to the three-point reciprocal plan between provinces of Canada and the State of New York which Mr. Lefkowitz said wouldn't involve changes in laws of any of the provinces. His suggestions were:

1. Each province would revoke registration of any dealer, issuer or promoter registered under its laws upon evidence he has violated laws of the State of New York in sale of securities. An agreement of this kind, Mr. Lefkowitz said, already exists with the Ontario Securities Commission. If the latter in investigation of operations in Ontario discovers anything which might violate laws of the State of New York, it gives the information to the New York Bureau of Securities. The Ontario Commission also cancels registration of dealers or promoters who in the process of selling securities violate New York laws.

2. Wider exchange of information between security administrators of Canadian provinces and New York. The State of New York sends its monthly reports to all provinces, but at the moment receives only the report of the Ontario Securities Commission.

3. Books and records of Canadian firms would be made available for perusal on a confidential basis, if requested. Only examination of records, Mr. Lefkowitz said, could make it possible for New York authorities to determine exact status of companies and the status of their attorneys in Canada who in his opinion sometimes shielded themselves under alleged confidential privilege.

He told the conference that a firm in Regina was currently phoning persons in New York State soliciting purchase of securities.

Didn't Qualify

The firm had failed to qualify as a dealer in securities in New York, even though it had been advised it was subject to provisions of state laws. Its operations were being scrutinized and Saskatchewan authorities had been asked to assist in the investigation.

Apart from long distance phone solicitations and use of the mails for distribution of circulars, Mr. Lefkowitz said there were boiler rooms in New York controlled by Canadian interests which published and circulated misleading information on Canadian oil, uranium and other mining stocks about which his department found it difficult to get information or any co-operation from Canadian firms involved.

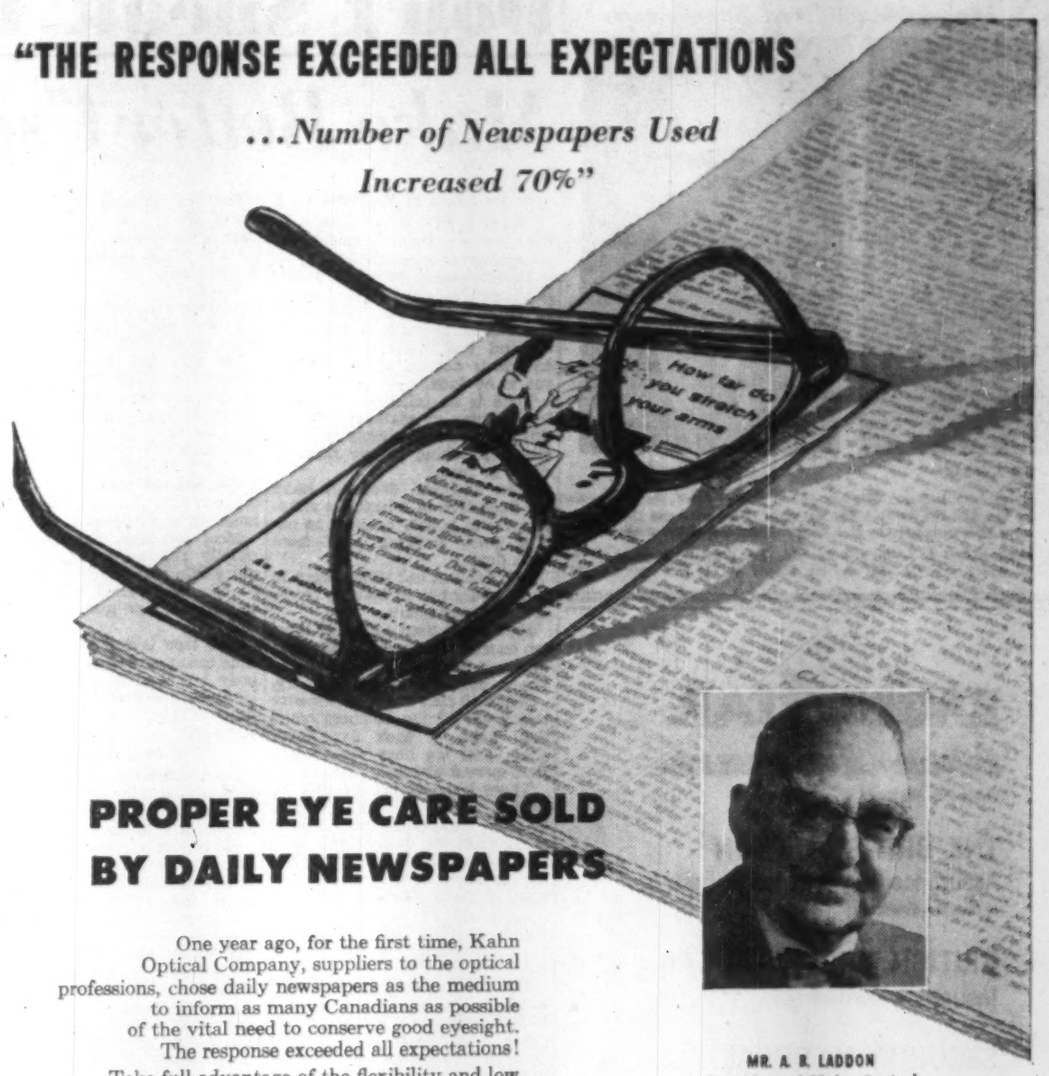
On the matter of exchange of information, the State of New York will be put on the mailing list to receive reports sent to other provinces on action taken against stock salesmen in Manitoba.

In cases where Canadian operators are stopped from doing business in New York, R. L. McDonald, chairman of the Manitoba Public Utility Board and also chairman of the conference, said there might be limits on what Manitoba could do. Each case would probably be dealt with on its merits. The utility board would examine the circumstances of each one and if action were required the board would take it.

Speaking only for Manitoba he said the same would apply to requests for access to company books and records. If any were received, Manitoba would co-operate to the extent of its power but subject to legal rights of Canadian interests involved.

Mr. Lefkowitz, accompanied by three associates of his office, attended the conference at his own request.

"THE RESPONSE EXCEEDED ALL EXPECTATIONS ...Number of Newspapers Used Increased 70%"



PROPER EYE CARE SOLD BY DAILY NEWSPAPERS

One year ago, for the first time, Kahn Optical Company, suppliers to the optical professions, chose daily newspapers as the medium to inform as many Canadians as possible of the vital need to conserve good eyesight. The response exceeded all expectations!

Take full advantage of the flexibility and low cost concentrated sales impact daily newspapers offer in the markets you want to reach. Contact your daily newspaper advertising managers for full information.

KAHN OPTICAL COMMENDED

Here are two of the commendations:

"The program of public-spirited advertising which Kahn Optical has placed in many Canadian daily newspapers is very commendable and we endorse your effort."

S. E. Matthews, President, The Opthalmic Dispensers of Manitoba

"Vision is man's most priceless possession and the fact that Kahn Optical has chosen to stress eye-sight conservation, in a series of daily newspaper messages, is certainly public service of the highest order."

Harold C. Arnold, President, The Canadian Association of Optometrists.

MR. A. B. LADDON
President of Kahn Optical

had this to say:

"So well received were our Eye-Care advertisements placed in daily newspapers during 1956, that we have now increased the number of newspapers by 70% for 1957. Every indication is that the majority of newspaper readers are reading . . . and heeding these educational messages."

Kahn Optical advertising is handled by Locke, Johnson & Co. Limited, Toronto

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Through a widespread network of agents and offices, we have collected all this information on Canada from coast to coast. These facts are at your disposal simply for the asking. Your enquiries will receive a prompt, private reply without obligation.

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Company Reports

To assist readers in appraising and comparing company financial statements, The Financial Post has a uniform method of presenting corporation accounts. Variations from the companies' published reports are footnoted.

Grain

McCABE GRAIN CO., Winnipeg, net profit of $480,255 for year ended June 30, 1957, was 7% lower than previous year's $516,790.

Supply of grain on farms in Western Canada and in commercial positions around the world is a record, says President Charles Kroft.

Company says it is handling a satisfactory share of the business in domestic and world markets.

Company completed construction of a large new elevator with the most up-to-date grain handling equipment at Fort Whyte on the outskirts of Winnipeg. New feed pelleting equipment was installed in the Victoria feed plant in St. Boniface.

Large stocks of grain in Western Canada and restricted movement out of the country have stimulated livestock and poultry production. Feed division has benefited. Restrictions on grain deliveries to feed processing plants imposed by present marketing legislation are the only impediments to a tremendous increase in this type of business, and greater diversification of western agricultural economy, company says.

The seed division has developed a satisfactory farm trade to supplement wholesale merchandising for export.

Annual meeting is Oct. 16.

INCOME ACCOUNT

Years Ended June 30:	1957	1956
Net earnings	$1,035,826	$1,160,932
Add: Assets prof.	61,232	13,983
Less: Depr.	177,284	165,686
Bond interest	83,306	86,031
Income taxes	356,213	406,408
Net profit	**480,255**	**516,790**
Less: Divds.	100,102	80,113
Surplus for year	**380,153**	**436,677**

*After provision for patronage dividends.

Times Bond Interest Earned:		
Before depr.	12.43	13.19
After depr.	10.31	11.31
Earnings per Share and Dividend Record:		
Class A	$24.22	$14.76
Paid	0.60	0.60
Class B	4.69	5.85
Paid	0.80+0.10	0.60+0.10

CONDENSED BALANCE SHEET

As at June 30:	1957	1956
Cash	$139,134	$110,827
Accts., rec., etc.	2,603,542	2,867,181
Inventories	13,941,153	11,727,166
Total curr. assets	**16,683,829**	**14,705,174**
Prep. exp.§	54,749	67,048
Invest. in subs.	50,400	50,400
Misc. assets	141,490	111,640
Fixed assets†	2,419,933	2,375,144
Total assets	**21,350,401**	**17,309,406**
Due bank	11,805,360	6,974,453
Accts., taxes, etc., pay.	2,402,193	3,505,406
Bonds due	75,000	75,000
Total curr. liab.	**14,282,553**	**10,554,859**
Funded debt	1,775,000	1,850,000
Other liabilities	269,164	222,700
Capital stock	704,564	704,564
Appraisal surplus	924,483	983,895
Capital surplus	.....	14,959
Earned surplus	3,394,635	2,976,429
†After depr. of	2,476,671	2,281,766

§Incl. in curr. assets in co.'s report.

Working capital	**4,401,276**	**4,150,315**

Manufacturing

WALTER M. LOWNEY CO., Montreal, net profit of $596,777 for year ended June 30, 1957, was 19.5% higher than previous year's $499,495.

Sales were a record. The chocolate division attained an increase of 13½% and the ice cream division 11.6%, averaging a consolidated increase of 12.8% over previous year, says President Edmund Littler, Jr.

Company transferred $60,000 to reserve for contingencies.

Removal of the 10% excise tax on the industry by the government this year enabled company to give better value to consumer, which company anticipates will have a favorable effect on sales this year, the president says.

INCOME ACCOUNT

Years Ended June 30:	1957	1956
Net earnings	$1,512,250	$1,353,490
Less: Deprec.	438,701	430,100
Bond int.	4,886	6,635
Inc. taxes	466,136	411,510
Amortization	5,750	5,750
Net profit	**596,777**	**499,495**
Less: Dividends	207,190	207,190
Surplus for year	**389,587**	**292,305**
Earnings per Share and Dividend Record:		
Common	$2.88	$2.41
Paid	1.00	1.00
Shares o/s at June 30:		
Common, n.p.v.	207,190	207,190

CONDENSED BALANCE SHEET

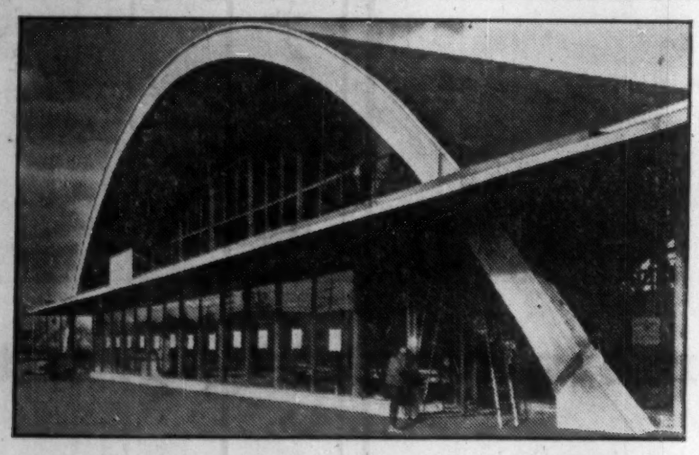
As at June 30:	1957	1956
Cash	$137,784	$54,661
Mkt. secs.†	6,645	6,645
Accts., etc., rec.	1,322,980	1,362,648
Inventories	2,438,966	1,852,613
Total curr. assets	**4,106,375**	**3,276,567**
Def. & prep. chgs.	126,043	95,056
Inv. in subsid.	7,800	7,800
Fixed assets*	2,585,472	2,596,890
Trademarks, etc.	12,500	17,500
Total assets	**6,838,190**	**5,993,813**
Bank loan	789,114	394,318
Accts., etc., pay.	949,580	873,015
Income taxes pay.	308,562	287,134
Bonds due 1 yr.	50,000	60,000
Total curr. liab.	**2,097,256**	**1,594,467**
Funded debt	50,000	100,000
Capital stock	260,036	260,036
Capital surplus	884,412	884,411
Contingency res.	60,000	.....
Earned surplus	3,486,486	3,156,899
†Market value	28,600	30,542
*After depr. of	4,184,181	3,805,304
Working capital	**2,009,119**	**1,682,100**

Bank Staff Changes

Montreal:

GAGETOWN MILITARY CAMP sub-agency of the Fredericton branch to be closed Oct. 16 and business transferred to parent office.

KITIMAT sub-agency in the City Centre opened Oct. 3 for service Tuesdays through Fridays.



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Architects: Husband Wallace & Baldwin
Contractors: Louis Donolo (Ont.) Ltd.
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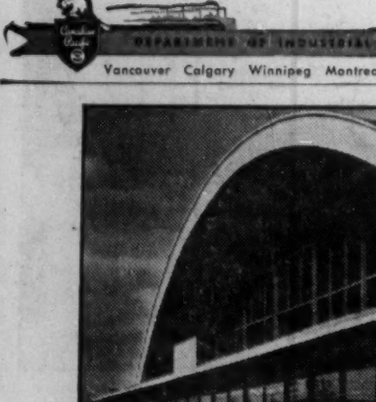

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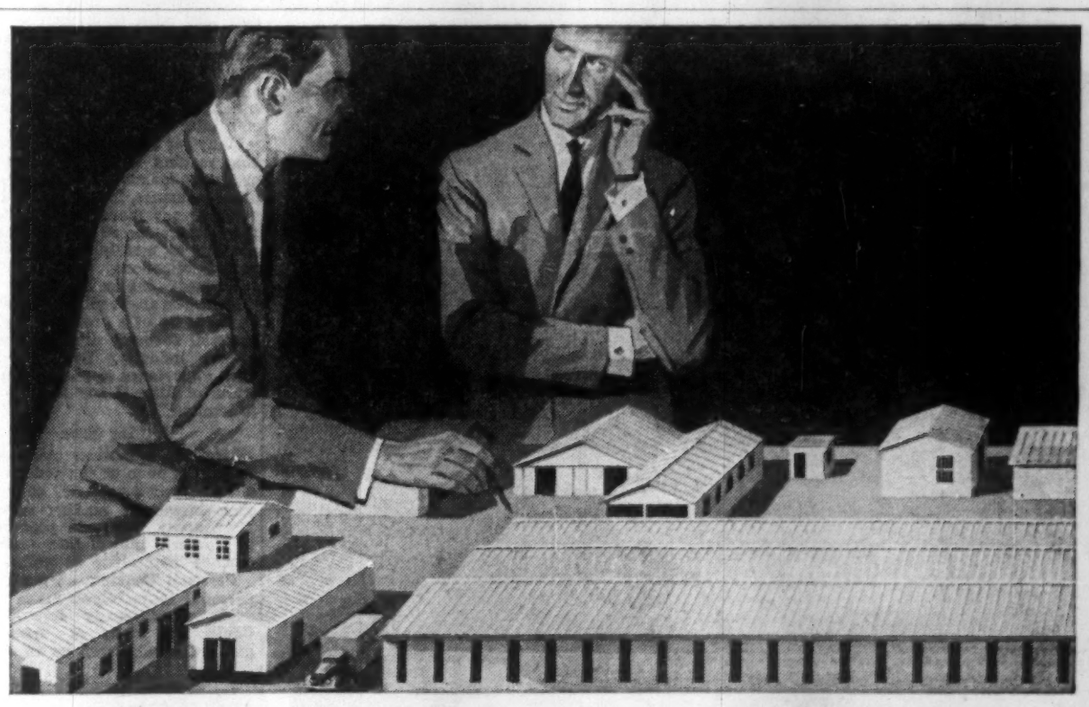

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Specify exactly the space you need in an Armco Steel Building; you get under roof fast at lower cost

Office, store, showroom, warehouse, plant—you have only to name the need. There's an attractive Armco Steel Building that meets it exactly! Clear span widths from 5'4" to 100' . . . sizes from 28 to 100,000 square feet and up.

Factory-engineered parts made to precision standards are delivered directly to your site, ready for assembly. Wall panels lock together quickly, then are bolted top and bottom. Result: a trim, permanent, noncombustible structure.

No design headaches. No engineering problems. And practically no maintenance. Armco Buildings are made of special aluminum-coated or zinc-coated steels that need no paint. Or you can select a special steel that holds paint in a lasting bond.

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ARMCO

27

ANNOUNCEMENT

Huron & Erie — Canada Trust Appointments

JOHN J. STUART

S. MURRAY CLARK

The appointments of John J. Stuart, Windsor and S. Murray Clark, Harrow, to the Windsor Advisory Board of The Huron & Erie Mortgage Corporation and The Canada Trust Company have been announced by N. Aylsworth, president of the companies.

Mr. Stuart is Vice-President J. T. Wing & Co. Ltd. Mr. Clark is Manager of the Amherstburg Fuel and Supply Co. Ltd. and the Kingsville Coal and Dock Co. Ltd.

Don't Sneak Extra Time

Make Better Use of Fewer Hours

By ERNEST W. FAIR

"What I need is more hours in the day — then I could get something accomplished!"

This statement, without a doubt, is uttered as often as any other in executive offices throughout the land as the working day nears an end and there remains an enormous accumulation of work yet to be done.

Time is an inflexible thing. It is a matter of mathematics and this rigid science simply will not allow stretching in any manner, shape or form.

This, however, does not leave the executive in a hopeless situation for it is still possible to obtain more working time from each day.

The trick is not in sneaking in extra hours but in making better use of fewer hours.

It is being used today by most top executives as well as the men in every management and supervisory post within the industry.

When all find out how to secure better use of the business hours they have in each day never again will we hear the remark first quoted above.

There is no magic formula involved. Nor does it take a genius or other exceptional individual to accomplish the desired end. It is a matter of more exacting attention to some of the regular routines of the executive's day.

From the advice of men with whom we have talked who have conquered this problem, here is what we can do.

Depend on your assistants more —Too many executives either fail to delegate chores to their assistants or continue to staff such individuals incapable of handling them.

Choose Staff

"Just about every executive I know could accomplish a great deal more at his job every day," one successful company head told us recently, "if he would first be more careful in choosing the calibre of his assistants so that they could competently handle more of the chores he now delegates to himself, and secondly, train them better than he has done in the past."

Situations often exist where executive personnel staffs are undermanned; where they are trying to get by with too few assistants and consequently performing tasks better left to others so they would themselves have adequate time for top executive programming.

Granting more authority to competent assistants is another step for improvement in this area in many organizations.

The best procedure, top executives tell us, is to adequately train one's assistants to handle all but the major policy routines in the company.

When this is done the executive always has more time for the big and important things that come up each day.

The idea and theory apply all the way through the firm from the top echelon down to immediate foremen and supervisors who can use it in their own day-to-day work as well as the big man in the front office.

Cut out red tape — Get rid of all of it that you can; delegate as much of it as possible to others.

Most red tape matters can be strictly routine ones which require litle real executive decision — can be handled by any well trained man or woman on one's staff.

Red tape is one of the biggest time consumers in any executive's busy business day. Sometimes it is vitally necessary — most of the time it could better be done without.

60% Waste

One authority estimates that 60% of the time of the average executive in governmental posts is wasted with useless red tape.

It is often very possible to secure a great deal of added time in our business day by doing one of the things in this area, i.e., get rid of all the really unnecessary red tape surrounding us or delegate more of it to others than we are doing at present.

Travel — is another big time waster in many an executive's day. We learn the importance of this factor in handling our business chores which take us to other cities or divisions of the company, but we seldom give equal attention to the "small travel items" involved in our movement about right in the organization locally every day of the week.

How many time taking steps could be saved by better planning of our daily executive routine right in our own offices? Greater use of the telephone, or executive communications, of delegating such chores to others, etc., are steps which can cut down such time waste in any executive's very own office.

Reading — Every executive job requires a great deal of reading. Some of it is vitally important. A great deal could be handled equally well by others. Certain such reading could be dispensed with altogether during our regular business day.

Top executives quickly learn that they must train their secretaries to weed out the useless and unimportant—to classify the rest into that which they must handle and which others can handle equally well or digest in the form of a later action report.

Many set aside certain pleasurable reading for home attention or leisure moment (such as business magazines, for example) and actually get more out of them than when forced by the time element to merely scan through such publications.

Business publications such as the one you are reading now must be made up of a great variety of material covering different areas of the industry. Some are of vital importance to one executive while of little if any importance to another.

Making Sure

Most top executives make sure they miss none of the former by having their secretaries earmark such important reading matter. They apply the same procedure to other information which reaches their office as well.

Personal Contacts—Are all the personal contacts you make in a day's work really important? Could not many of them be handled equally well by an assistant?

A personal contact requires much of one's time. Usually 10 times as much as we would need to handle the same matter by telephone or written communications.

Sometimes it is vitally important that these contacts be made personally; but not always. Weeding out those that are not very important can give any executive additional time during each day.

Communications — How much oral communication do we use today that is really unnecessary? How many messages to employees could as well be handled in a general memo rather than singly to each individual concerned — the latter takes just about as much time for each one as it will require to handle half a dozen in a single communication.

Telephone calls — There's an art in learning to use one's business telephone without time waste; one well worth cultivating and putting into use.

Keeping conversation curt and to the point, developing a telephone technique which keeps control of the conversation, leaving out unimportant and trivial matters and personal chit-chat from business conversations, and confining certain communications to written memos are methods we can use to reduce wasted executive time on telephone calls.

Outside activities — A certain amount of community and social activities are essential to the business life of every executive. But they can be overdone before we know what has happened.

The old timers have learned that they can afford to devote just so much of their executive day to such activities and they see to it that such demand upon their time is kept within those limits. It is the easiest and surest way of handling this particular problem.

Negotiations others should handle waste many an executive's time. It is mighty easy to get into the frame of mind which belies the competence of others in handling such negotiations in widely different areas of our work.

When we assume that only we can handle all such matters we automatically squeeze out good time from our business day which could be better used to real executive advantage.

As with all other such business matters certain negotiations cannot and should not be handled by anyone else. However, even these can often be handled in the preliminary (and mostly time consuming) stages by someone else on the staff.

All of the foregoing can be applied to any executive's day to give him better use of the hours in that day and thus provide him with the "more hours in the day" he frequently calls for.

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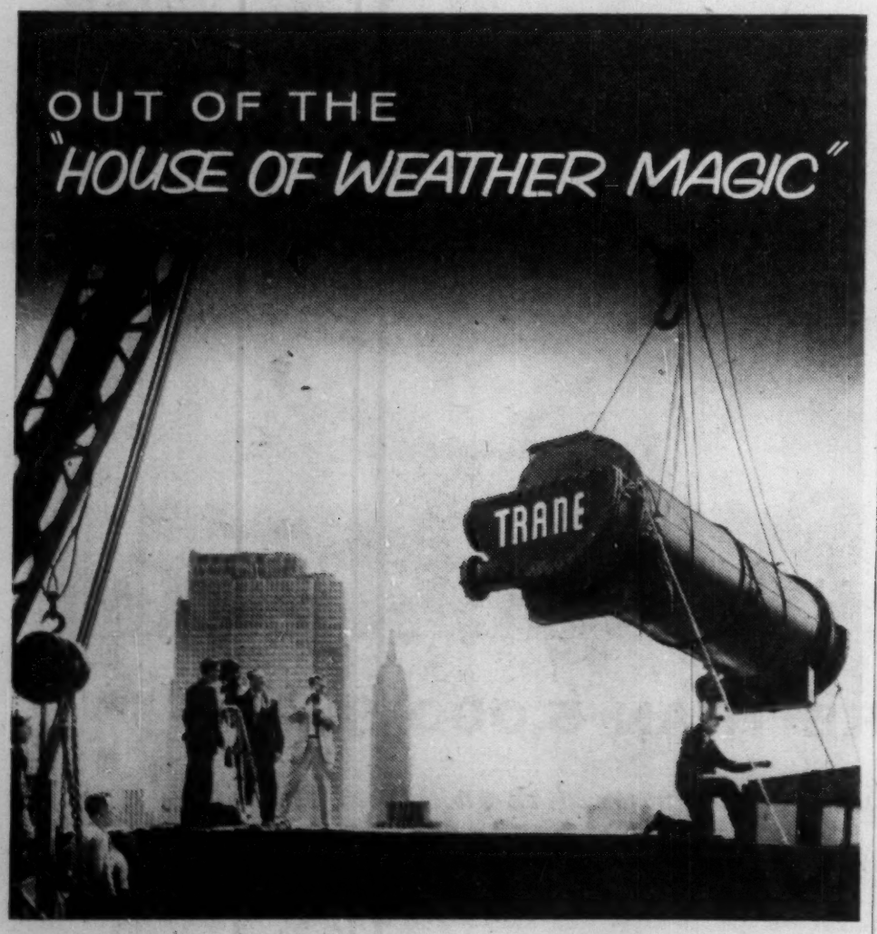

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For modest office buildings or soaring skyscrapers . . . Trane CenTraVac is the perfect heart of any air conditioning installation! Lightweight and vibration free, Trane CenTraVac may be installed anywhere from basements to roof. In this dramatic photo, a Trane CenTraVac settles on top of New York's Barbizon Plaza Hotel, 40 stories high.

The first successful hermetic centrifugal water chilling unit, Trane CenTraVac was developed and perfected in the Trane "House of Weather Magic".

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ANNOUNCEMENT

J. C. WILSON LIMITED

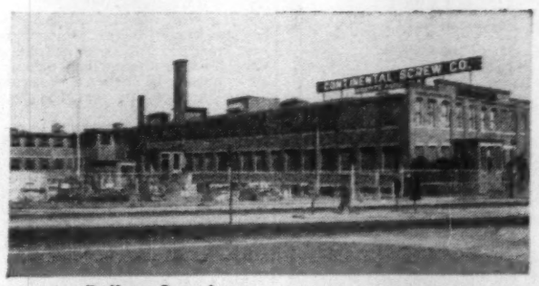
A. WELCH — P. SIMPSON — D. H. McKNIGHT — N. M. MacLEISH

F. Howard Wilson, President, announces the formation of a new Marketing Division of the Company to be headed by A. Welch as Manager of Marketing. In this position Mr. Welch will be in charge of the Distributing Division of the Company and its Subsidiaries and will direct all sales and merchandising activities.

The merchandising activity of the Company and its Subsidiaries is to be centralised at the Head Office in Montreal under the guidance of three Product Managers: Mr. P. Simpson — Wrapping Papers, Paper Bags and Towels; Mr. D. H. McKnight — Specialty Paper Products and Mr. N. M. MacLeish — Folding Cartons.

Dollars Burned
Fire which originated in bronze room of this unsprinklered machine shop spread out of control before apparatus arrived. Flames shot beneath roof to all parts of the 30,000 sq. ft., brick, wood-joisted structure, then jumped to dwellings nearby. Total damage: $593,500.

Fire in two metalworking plants



Dollars Saved Flash fire occurred at the Continental Screw Co. when hot welding flux dropped through a duct hole into wooden containers of oil-covered screws on the floor below. Oil ignited and flared menacingly. Two Grinnell Sprinklers opened automatically and put out fire.

LAST YEAR, over a hundred million dollars went up in smoke. Insurance, of course, restored many of those dollars. But restoring the businesses involved is another thing! Statistics show that 2 businesses out of every 5 having a serious fire never came back. The reason? . . . rebuilding, restocking and restaffing costs never were so high!

That's why more and more businessmen are turning to insurance against fire that's 100% *automatic* . . . Grinnell Automatic Sprinklers. Grinnell Sprinklers stop fire any time, any place . . . wherever it may strike, night or day.

Grinnell Sprinklers can not only save your business, they can save you dollars — through reductions in fire insurance premiums of between 50 to 90%. And when tied in with a Central Station Supervisory Service, the elimination of costly (and sometimes uncertain) services of a watchman is possible.

Without cost or obligation, ask a Grinnell engineer to survey your property and submit a cost estimate. Write to: Grinnell Company of Canada, Ltd., Edmonton, Montreal, Toronto, Vancouver, Winnipeg.

GRINNELL
Automatic Sprinkler
FIRE PROTECTION
SINCE 1878

Why Does Customer Buy? Emotion the Key to Profits

By GEORGE L. WILCOX

We are beginning to learn some new — or possibly some old but forgotten — things about our ultimate customers, the public.

One thing we are learning— or relearning — is that he consists of two essential parts:

- His mind.
- His emotions.

With his mind he understands things, gets curious about things, learns about things. But very often the driving force that causes him to act — and most important, to buy — is emotional.

This discovery, or re-discovery, has recently given rise to a brand new industry, called motivation research.

It consists of studying customers and their buying habits, not only by observing them, as we always used to do, but also by having probing "depth" interviews with them; by applying all the latest knowledge of cultural anthropology, social psychology, individual psychology and even psychiatry to find out the deep, hidden, underlying motives that cause them to desire what they desire, do what they do, and buy what they buy.

This field of research, still in its infancy, first got its start in the field of retail sales, but it is rapidly making headway now among almost all the areas of merchandising and selling, from pancake mixes to hydroelectric generators.

George L. Wilcox is president, Canadian Westinghouse Co., Hamilton.

This is a digest of a speech he made to the Canadian Association of Purchasing Agents at their 32nd annual conference in Toronto.

The motivation researchers have studied how people buy things in a supermarket. In some studies, they have concealed cameras that not only show how the shopper moves and looks, but also measures the blink rate of her eyelids.

Now, these scientists have discovered that the number of times people blink their eyes in a minute is a pretty good index of their state of tension.

The average person blinks his eyes about 32 times a minute. If he is tense he blinks more frequently, and under extreme tension the blink rate may go as high as 50 to 60 times a minute.

When Women Shop

The cameras in the supermarket were expected to pick up signs of excitement in women shoppers. But, in fact, the blink rates of shoppers dropped to a subnormal 14 blinks per minute, indicating that the average woman shopper in a well-arranged supermarket is not excited — she is actually in a mild state of hypnosis or trance. (This is because, in one of these places, she feels she is in a sort of fairyland, where everything is available, just for reaching out and putting it in her basket).

Only when she approaches the counter, where she must pay for her plunder, does her blink rate begin to show real excitement. But, by then, it is too late; to put things back would make her look foolish — so she goes ahead and pays, and takes her dreamland plunder home.

That, at least, is what the motivation research people say. And there is no question that motivation research and motivational sales appeals, reaching the imagination and emotions as well as the mind, have had a powerful effect in some areas in increasing sales.

I do not know how far we can count on such things as motivation research and new selling techniques to help us increase the markets for our gigantically productive Canadian economy.

But I do know that ways must be found to increase those markets, if we are to continue to develop and expand.

Bigger markets must be found not only at home, but also abroad. The number of customers, and the amounts they buy, must grow and grow at a steady pace.

Well up among the key factors that will help us find and keep those growing markets is a reputation for high quality, superior performance, good service, and reasonabe cost.

These are aspects of our Canadian goods and services that management expects the purchasing agent to seek, judge and insist upon.

There are many other contributions the purchasing agent can also make. There was a time when, depression-trained, he looked with frosty eye on anything that might cost money, or involve changes in methods or materials, or cause an eyebrow-raising in other departments of his company, especially the manufacturing areas.

That time, happily, is gone, or is going fast. The purchasing agent in most organizations is now a stalwart, co-operating member of the production team who must buy with an eye to improving the company's product or services, while at the same time trying to increase productivity and reduce costs.

Needs Knowledge

This demands a knowledge of new materials, new methods, new devices — anything that will help to do the job better.

How many companies take full advantage of what the purchasing agent can offer?

He is in a key position to know what is going on. To him daily come swarms of those troubadors of the economic world, the salesmen, each with his own burden of news, views, gossip and sales appeals.

If the purchasing agent listens carefully, if he is alert to the possibilities, he should report to management where shortages exist, where new things are being developed, and even where there may be opportunities for the company to make and sell new products — almost before anyone el· in the organization may hear of them.

The purchasing agent is naturally an expert in analyzing — and assessing — sales appeals of many kinds. How many companies call upon this special knowledge and skill of their purchasing agents in improving the methods and techniques of their own salesmen?

Perhaps there is a resource here that Canadian business might well draw upon more fully in its development of expanding markets.

Purchasing agents are great seekers for market and product information. As such they are steady readers of advertisements and soon become adept at separating the wheat of solid information from the chaff of weak or spurious claims. Could not, then, many companies benefit from their reactions to their own advertising?

The Mix Caused a Stir

The manufacturers of a complete cake-mix were puzzled when they found out that it didn't sell very well.

There was every reason why, from a logical point of view, it should have gone like a whirlwind.

It was offered in a pretty package.

It was as complete as could be. All the housewife had to do was add a little water, stir and bake, and, presto — a cake better than grandmother ever made, and cheaper, too.

The advertising was voluminous and mouth-watering. The price was right.

But still it didn't sell.

So the company called in motivation research people. They came up with this explanation:

Women, they found out, were not buying the complete cake mix because using it made them feel subconsciously guilty.

It wasn't the way mother made a cake — and, in their unconscious minds, they could feel mother's disapproval. Also, it took away from them the sense of creation. It was just too easy.

The answer was simple. Just leave out one of the ingredients, the milk or the eggs. Let the housewife add these herself, whip up the result in her own food mixer, and there it was: Her own cake, made by her very own hands:

As a result of this change the new cake-mix sells very well.

—George L. Wilcox

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new driving economy
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Velvet 98

B-A's exclusive new Velvet compound gives full-power performance to the advanced, high-compression engines of today's cars *plus* the protection of velvet-smooth performance. *Velvet 98* effectively stops engine "rumble" and knock, caused by pre-ignition. It extends exhaust-valve and spark-plug life.

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By Night...
a new magnificence
for mighty Niagara

The greatest flood of multi-coloured light ever generated will blaze upon the thundering glory of Niagara early next summer. The entire waterfall from shore to shore will be one vast illuminated panorama ... a new concept in lighting this world wonder.

The installation, producing over 10 times the present brightness, uses 20 specially designed, weather-proofed, high intensity carbon arc searchlights. Each is capable of producing a beam intensity of 210 million candlepower.

Amalgamated Electric, an associate company of The General Electric Co. Ltd., of England was selected to replace the existing lighting system.

Northern Electric Co. Ltd., a leading distributor of electrical equipment, was awarded the contract by the Niagara Falls Illumination Board, comprising corporate members from both the United States and Canada.

Amalgamated is understandably proud of this international recognition.

Amalgamated leadership in lighting, both exterior and interior, results from an ability to call on tremendous resources from two continents. Behind Amalgamated stands the experience of The General Electric Co. Ltd., of England, an acknowledged world leader. Also, as sole Canadian manufacturer of leading United States lines, there is a constant interchange of research, development and product knowledge.

The simplest or the most complex lighting assignment can be entrusted to this knowledge and experience.

In all phases of the electrical industry, Amalgamated can fill your needs whether they involve a light switch or an atomic power station.

Let Amalgamated solve your next electrical problem.

A·E· CORP'N LTD.

AMALGAMATED

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